

Defense Nuclear Agency Alexandria, VA 22310-3398



DNA-TR-93-169

Johnston Atoll Plutonium Cleanup Project Contract Bridge Report

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April 1995

Technical Report

CONTRACT No. DNA 001-90-C-0119

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Form Approved OMB No. 0704-0188

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Davis Highway, Suite 1204, Arlington, VA 22202-430	72, and to the Office of Management and Budget	t, Paperwork Reduction Projec	t (0704-0188), vvasnington, DC 20303
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE A	ND DATES COVERED
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4. TITLE AND SUBTITLE			5. FUNDING NUMBERS
Johnston Atoll Plutonium Cleanup	Project		C - DNA 001-90-C-0119
Contract Bridge Report			C - DNA 001-90-C-0119 PE - 62715H
Contract Difuge Report			PE -62/15H PR - OH
6. AUTHOR(S)			TA - 00
Charles L. Hellier and Richard W.	Doane		WU-DH000100
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	D) AND ADDRESS (ES)		8. PERFORMING ORGANIZATION
7. PERFORMING ORGANIZATION NAME(S) AND ADDHESS(ES)	l	REPORT NUMBER
TMA/Eberline			
5635 Jefferson Street, NE			I
P.O. Box 3874		i	
Albuquerque, NM 87109-3874			
9. SPONSORING/MONITORING AGENCY	NAME(S) AND ADDRESS(ES)		10. SPONSORING/MONITORING AGENCY REPORT NUMBER
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Defense Nuclear Agency	•		DATA TED 00 100
6801 Telegraph Road			DNA-TR-93-169
Alexandria, VA 22310-3398			
FCLH/Bramlitt			
11. SUPPLEMENTARY NOTES			3 1 D1210D OILOO 00001
This work was sponsored by the I	Defense Nuclear Agency unde	r RDT&E RMC (Ode R1310D OH OO 00001
LEEE 6420A 25904D.			
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12a. DISTRIBUTION/AVAILABILITY STATE	I NITIVI		
Approved for public release; distr	ibution is unlimited.		
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13 ABSTRACT (Maximum 200 words)			

This report continues the documentation of the operation of TMA/Eberline's Segmented Gate System technology for removing mixed plutonium and americium contamination at DNA's Johnston Atoll site. Contaminated feed is conveyed under arrays of radiation detectors coupled with sophisticated computer software developed by Eberline Instrument Corporation. Segmented gates (chutes) on pneumatically-driven pistons move forward when contamination is detected to remove only the contaminated portion from the main flow of feed material. Only about one pint of contaminant is removed during each diversion event. At the JA site, a 98% volume reduction has been achieved, with the remediated soil cleaned to DNA's criteria for release for unrestricted use of 500 Bq/kg total transuranic alpha contamination and no "hot" particles of greater than 5000 Becquerrels. The low level waste concentrate is expected to be packaged for shipment to an approved defense waste disposal site.

14. SUBJECT TERMS Radwaste Minimization	P	utonium Waste	15. NUMBER OF PAGES 194
Radioactive Waste Managerr Radiological Remediation To	LVIII	ransuranic Remediation	16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19, SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	SAR

CONVERSION TABLE

Conversion factors for U.S. Customary to metric (SI) units of measurement.

TO GET

MULTIPLY	> BY	
TO GET <	BY <	DIVIDE
angstrom	1.000 000 X E -10	meters (m)
atmosphere (normal)	1.013 25 X E +2	kilo pascal (kPa)
bar	1.000 000 X E +2	kilo pascal (kPa)
barn	1.000 000 X E -28	meter ² (m ²)
British thermal unit (thermochemical)	1.054 350 X E +3	joule (J)
calorie (thermochemical)	4.184 000	joule (J)
cal (thermochemical/cm²	4.184 000 X E -2	mega joule/m ² (MJ/m ²)
curie	3.700 000 X E +1	* giga becquerel (GBq)
degree (angle)	1.745 329 X E -2	radian (rad)
degree Fahrenheit	$t_{K} = (t^{\circ}f + 459.67)/1.8$	degree kelvin (K)
electron volt	1.602 19 X E -19	joule (J)
erg	1.000 000 X E -7	joule (J)
erg/second	1.000 000 X E -7	watt (W)
foot	3.048 000 X E -1	meter (m)
foot-pound-force	1.355 818	joule (J)
gallon (U.S. liquid)	3.785 412 X E -3	meter ³ (m ³)
inch	2.540 000 X E -2	meter (m)
	1.00 000 X E +9	joule (J)
jerk joule/kilogram (J/kg) radiation dose		
absorbed	1.000 000	Gray (Gy)
	4.183	terajoules
kilotons	4.448 222 X E +3	newton (N)
kip (10000 lbf)	6.894 757 X E +3	kilo pascal (kPa)
kip/inch² (ksi)	1.000 000 X E +2	newton-second/m ² (N-s/m ²)
ktap	1.000 000 X E -6	meter (m)
micron	2.540 000 X E -5	meter (m)
mil	1.609 344 X E +3	meter (m)
mile (international)	2.834 952 X E -2	kilogram (kg)
ounce	4.448 222	newton (N)
pound-force (lbs avoirdupois)	1.129 848 X E +2	newton-meter (N·m)
pound-force inch	1.751 268 X E +2	newton/meter (N/m)
pound-force/inch	4.788 026 X E -2	kilo pascal (kPa)
pound-force/foot ²	6.894 757	kilo pascal (kPa)
pound-force/inch² (psi)	4.535 924 X E -1	kilogram (kg)
pound-mass (lbm avoirdupois)	4.214 011 X E -2	kilogram-meter ² (kg m ²)
pound-mass-foot ² (moment of inertia)	1.601 846 X E +1	kilogram/meter ² (kg-m ³)
pound-mass-foot ³	1.000 000 X E -2	** Gray (Gy)
rad (radiation dose absorbed)	2.579 760 X E -4	coulomb/kilogram (C/kg)
roentgen	1.000 000 X E -8	second (s)
shake	1.459 390 X E +1	kilogram (kg)
slug	1.333 22 X E -1	kilo pascal (kPa)
torr (mm Hg, O°C)		

^{*}The becquerel (Bq) is the SI unit of radioactivity: 1 Bq = 1 event/s. **The Gray (GY) is the SI unit of absorbed radiation.

TABLE OF CONTENTS

Section		Page
	CONVERSION TABLE	iii
1	INTRODUCTION	1
	1.1 GENERAL	1
2	EXTENSION PERIOD MAINTENANCE AND MODIFICATION OPERATIONS	2
	2.1 PLANT MODIFICATIONS	2 2
3	SOIL PROCESSING OPERATIONS	4
	3.1 GENERAL	4
Appendi:	x JA SOIL CLEANUP PLANT LOG SUMMARIES	7

SECTION 1

INTRODUCTION

1.1 GENERAL.

This summary report covers an extension of DNA Contract DNA001-90-C-0119 during the period from 1 June 1993 to 5 August 1993. This report presents the results of additional plant modifications and completion of construction of sorter conveyor systems 3 and 4, and the data pertaining to soil processing during the period.

1.2 TECHNICAL OBJECTIVE.

The primary objectives during the extension period were to complete construction of sorter conveyor systems 3 and 4 and to continue to process plutonium contaminated soil when modifications or construction was not being performed.

Prior to the start of the extension period, major construction of sorters 3 and 4 began in January 1993. Most of the conveyor systems had been fabricated and emplaced, and installation of the detector systems had been started, however, testing, calibration and electrical system check-outs had not been performed. Additionally, Version 1.11 of the JACC system software was to be installed and tested, remaining electronic components for detector systems were to be procured and installed, and belt weigh scales for both units 3 and 4 had to be installed and calibrated.

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SECTION 2

EXTENSION PERIOD MAINTENANCE AND MODIFICATION OPERATIONS

2.1 PLANT MODIFICATIONS.

At the start of the extension period, soil production was halted as primary emphasis was devoted to completion of units 3 and 4 and plant maintenance.

The majority of the on-island TMA/E staff went on rotation during the period 24 May 1993 to 10 June 1993. During the period 7 to 10 June, TMA\E staff consisted of Mr. Bob Dakin, electrical engineer, Mr. Jim Woods and Mr. Ken Murphy, electronics technicians, and Mr. Dave Lawrence, health physics technician.

During the week of 20 June 1993, JACC version 1.11 software was installed on units 1, 2 and 4. Particle and distributed efficiencies were calculated and completed. Unit 3 was not on-line due to shortages of detector electronics boards and a master controller board.

Two belt weigh scales were installed on units 3 and 4 and the hardware and wiring for a third scale was installed should a convertor for diverted soil be installed. Replacement parts for the weigh scales' electronics had to be secured from the manufacturer, and the scales were calibrated, tested and placed in an operational status. Additionally, the mass flow meter was returned to the factory for repairs and subsequently installed and calibrated.

The segmented gates on units 3 and 4 operate exactly opposite than those on units 1 and 2, in that the gates on units 3 and 4 remain extended during operation and retract to trap the hot particle. This mode of operation caused excessive "splatter" of soil when hitting the gates and engineering changes were made to reduce excessive dust and soil bouncing off the gates. This consisted of installing belt wiper material behind the gates which reduced the dust and soil bounce off the gates.

During the week ending 1 August 1993, modifications and construction was completed on units 3 and 4. Minor modifications to dust misting systems and installation of grizzly conveyor covers remain to be accomplished pending receipt of on-order materials and parts.

2.2 PLANT MAINTENANCE.

In addition to modifications to units 3 and 4, corrosion control and scheduled maintenance were performed on units 1 and 2. Units 1 and 2 grizzly feed belt was damaged and had to be replaced and cracks in the frame were repaired and welded. Other maintenance and repairs were performed to units 1 and 2 as follows:

- a) Installed new grizzly belt skirting and performed adjustments.
- b) Adjusted the screen belt and screen belt skirting.
- c) Installed required weights on vibrating screen shaft.
- d) Adjusted tail pulley skirting on sorter feed.
- e) Cleaned and lubricated complete system.
- f) Adjusted skirting on sorter 1 and 2.
- g) Repaired abrasions and holes on unit 2 belt.
- h) Adjusted skirting and tail pulley on clean belt and day bin.
- i) Installed water misting system on clean stacker.

SECTION 3

SOIL PROCESSING OPERATIONS

3.1 GENERAL.

Soil production continued during the extension period when construction and modifications to units 3 and 4 were halted. Primary production continued with units 1 and 2 and limited production was conducted on unit 4 due to construction.

3.2 PLANT PRODUCTION.

Soil processing was accomplished on 30 days during the extension period. Units 1 and 2 processed soil on a total of 29 days, and unit 4 processed soil on 2 days. Unit 3 did not process soil during this period due to shortage of a master control board and detector boards in it's detector box. Figure 3-1, JA SOIL CLEANUP PLANT LOG OVERALL SUMMARY REPORT-COMBINED SORTERS, depicts the daily processed mass in metric tons, cumulative production, weight reduction, and time utilization during the extension period.

Cumulative production during the extension period totaled 5,321 metric tons (Clean + Diverted). Clean soil produced totaled 5,291 metric tons and diverted soil total was 29.44 metric tons.

Weight reduction during the 30 days of processing was 99.5%. The range was from 97.1 to 99.1.

The primary objective during the extension period was to complete construction on units 3 and 4 and production was second. In view of the construction activities by TMA/E, time utilization as it pertains to soil production was an excellent average of 77.4% production rate. Non-availability time as it pertains to production was primarily due to required plant modifications.

Table 3-1. JA soil cleanup plant log overall summary report-combined sorters.

Date			21-Jun	22-Jun	23-Jun	24-Jun	25-Jun	28-Jun	29-Jun	30-Jun	105-50)nf-20	Inf-SO	Jul-90	12-30(13-301	14-30	15-300	16-30	19-Jul	20-Jul	21-30(22-Jul	23-Jul	24-301	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	02-Aug	25-Aug	26-Aug	27-Aug	28-Aug	30-Aug
> -	NS2	(ton)					1038			,		1039		383					1077						920						981	199				689	
WEEKLY	K+C	(tou)					1074					80%		309					1005						899						1012	216				292	
AVE	(hr.)		8.5	10.9	11.5	11.3	9.5	11.5	10.4	6.5	7.5	7.0	11.4	6.9	11.5	11.5	11.5	10.4	9.0	7.5	8.8	8.9	9.2	8.3	7.1	9.6	8.4	9.3	9.3	11.7	5.3	11.4	9.5	10.5	10.2	10.0	12.5
S/S	8		9	•	N.	2	z	ដ	27	23	23	22	n	ñ	32	32	ដ	8	%	30	5ò.	82	&	28	8	28	5 8	&	28	62	53	28	28	62	53	&	30
H+C-WS2	(tou)		156	(19)	(14)	(<u>S</u>)	(63)	CE3	(14)	(32)	(99)	(3)	(93)	4	€	20	(12)	(62)	(50)	(53)	3	33	*	3	-	18	0	(9)	0	==	7	19	9	20	14	31	ß
X+C	(tou)		559	224	227	217	176	218	198	120	138	132	116	193	221	215	214	190	164	134	160	168	167	153	117	180	165	13	182	224	82	216	179	208	193	184	236
OVR.	(ton)		**	5	£1	£ 3	4	29	8	8	76	ጽ	103	2	103	. <u>.</u>	29	82	87	2	29	52	3	9	47	9	3	ĸ	22	87	31	22	92	92	22	61	ĸ
NS8	(ton)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	O	0	0
NS7	(tou)		0	0	0	0	0	.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	o	0	0	0	0	0
MS6	(tou)		0	0	0	0	0	0	0	0	0	0	.0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0	0	0	0	0	0	0	0	0
WSS	(ton)		0	•	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NS4	(tou)		0	0	0	0	0	.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	~	~	~	~	8	8	m	m	-	2	7	m	2	2	2

JA soil cleanup plant log overall summary report-combined sorters (Continued). Table 3-1.

Date			31-Aug	01-Sep	03-Sep	04-Sep	07:-Sep	08-Sep	09-Sep	10-Sep	11-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep .	18-Sep	20-Sep	21-Sep	22-Sep	23-Sep	54-Sep	25-Sep	27-Sep	28-Sep	29-Sep	30-Sep	01-oct	02-0ct	04-0et	TOTAL	DAY/WK AVG	NUMB DAYS/WKS
-	NS2	(ton)				297					777						1161						10%0						1193		30,959	584	23
WEEKLY	¥+C	(ton)				826					1592						2420						2299						2422		36,611	691	53
AM	Gr.		12.5	12.3	9.1	8.8	7.6	11.9	12.2	11.1	6.7	11.7	11.8	11.6	11.8	11.7	6.5	10.7	11.3	11.4	11.6	8.9	8.9	12.0	11.5	12.0	11.7	12.0	7.5	12.0	2.131	9.7	219
Š	8		28	R	0	0	0	2	28	13	1	2	2	7	21	4	<u>\$</u>	4	2	\$	<u>\$</u>	\$	22	\$2	\$2	77	54	25	\$2	22		22	~
N+C-WS2	(ton)		.12	3,5	8	25	92	202	214	213	127	525	219	237	32	222	115	206	525	223	225	154	13	233	197	226	. 218	221	134	229	89		228
#+C	(tou)		236	223	8	25	26	421	439	410	556	436	740	434	436	438	236	389	419	419	435	321	316	435	807	432	434	447	566	450	17,061		232
SVS SVS	(tou)		83	102	0	0	0	16	8	30	12	47	39	25	36	29	28	37	45	45	8	38	40	8	2	8	69	٦.	44	61	10 155		218
NS8	(tou)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	c	•	83
WS7			0	0	0	0	Ó	0	0	0	0	0	0	0	.0		.0	0	0	0	0	0	0	0	0	0	0	0	0	0	c	•	63
9SM			0	0	24	97	82	211	221	24	111	224	221	222	224	217	119	186	500	207	220	151	153	216	17	211	181	219	129	221		Ç,	63
VSS			0	0	57	87	2	210	220	25.	110	227	225	222	226	221	121	191	212	207	220	152	154	219	180	200	187	218	131	219		92614	63
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APPENDIX

JA SOIL CLEANUP PLANT LOG SUMMARIES

SORTER 1 21-Jun-93				
AVERAGE BACKGROUND COUNT RATE	0.73 ± 0.	04 c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.28 tons	120.4 tons	
HAXIHUH/SORT		4.7 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	58.2 kg	
TO MOUNT DECOVERY				99.8%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.22 yd³	95.5 yd3	95.7 yd1/day
EQUIVALENT SOIL-IN-GROUND		V.C. /C	·	·
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)			
TOTAL		4,983 kBq		
MAXIMUM/SORT		597 kBq		
MINIMUM/SORT		3.1 kBq		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	1,657 kBq	(4,087)k8q	
MAXIMUM/SORT	inite y notice to the same of	281 kBq	8 kBq	
MINIMUM/SORT		0 Bq	-18 k8q	
SPECIFIC ACTIVITY		5,984 Bq/kg	(34)Bq/k	g
WORK HISTORY			04.70.84	
WORK DAY START	04:45 AM	WORK DAY END	04:30 PM	
PLANT START-UP	04:45 AH	PLANT SHUT-DOWN	04:30 PM 03:55 PM	
START SOIL PROCESSING		END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AH	LUNCH PERIOD	0.0 111	
WORK HOURS		11.8 hr		
AVAILABLE HOURS		11.8 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	10.66 hr		
DOWN-TIME		1.09 hr		
TOTAL SYSTEM PAUSE		0.09 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.44 hr		
SHUT-DOWN		0.57 hr		
PLANT PERFORMANCE		90.7%		
PRODUCTIVITY		90.7%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	2,176		
NONPROCESS RECORDS (Test, calibrat		5		
20-SEC PROCESS RECORDS	•	1,919		
TOTAL SORT		0=0MM & 0<0M 0		
NO SORT		1,732 AD=0 & MD=0 8	K MND>0	
SOME SORT		187 AD>0&0 <md<mn< td=""><td>(smONM>ONM&xsm(</td><td></td></md<mn<>	(smONM>ONM&xsm(
UNEXPLAINED RECORD	s	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0 & 1	мр 0		TIME	TIME
AD<0 & 1	HD 0		05:51:52	05:34
ACT_P <5 kBq	47 18.3%		13:07:52	

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2	-SEC CO	JNT PERIODS				19,190					
_	000	2-SEC RECORD	S WITH S	ORTS			(ACT P	>0 kBq)			
		2-SEC RECORD			IN >1 DE	TECTOR	_				
			DETECTO		61		91.0%				
			DETECTO		6		9.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
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		AVG TIME BET				202.0	sec				
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1-GATE S	ORTS	131	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	0	0.0%	-14000	1	-223			4000	10	3.9%	4
2	17	13.0%	-12000	8	-191			8000	105	40.9%	8
3	20	15.3%	-10000	5	-159			12000	43	16.7%	12
4	23	17.6%	-8000	23	-127			16000	25	9.7%	16
5	31	23.7%	-6000	124	-95			20000	16	6.2%	20
6	17	13.0%	-4000	320	-64			24000	12	4.7%	24
7	20	15.3%	-2000	517	-32			28000	8	3.1%	28
8	3	2.3%	0	489	0			32000	6	2.3%	32
TOTAL	131		2000	297	32			36000	5	1.9%	36
			4000	107	64			40000	6	2.3%	40
2-GATE S	ORTS	126	6000	27	95			44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	5	127			48000	2	0.8%	48
8			10000	1	159			52000	3	1.2%	52
9	7	5.6%	12000	0	191			56000	1	0.4%	56
10	14	11.1%	14000	0	223			60000	2	0.8%	60
11	22	17.5%	16000	0	254			64000	4	1.6%	64
12	29	23.0%	18000	0	286			68000	2	0.8%	88
13	23	18.3%	20000	0	318			72000	1	0.4%	72
14	18	14.3%	22000	0	350			76000	1		76
15	13	10.3%	24000	0	382			80000	0	0.0%	80
TOTAL	126		26000	0	413		i	84000	1	0.4%	84
			>28000	0	0		>	84000	4	1.6%	>84
			TOTAL	1924				TOTAL	257		
SUMMARY								u.	474		
		CLE EVENTS	261		SORTS BY			T	131		
		ICLE EVENTS	87		SORTS BY	TWO GA	ITES		126		
Đ	ISTRIBUT	ED EVENTS	0								

REC CODE EXPLANATION

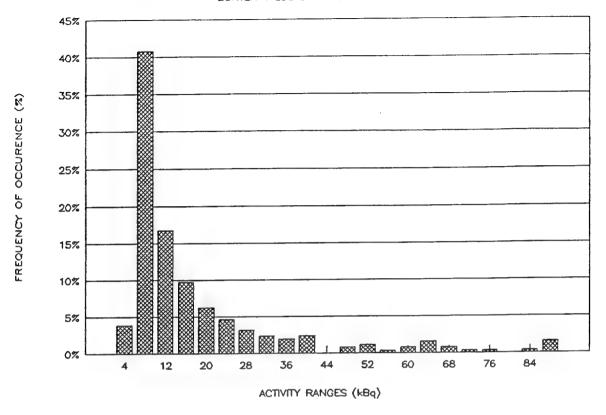
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

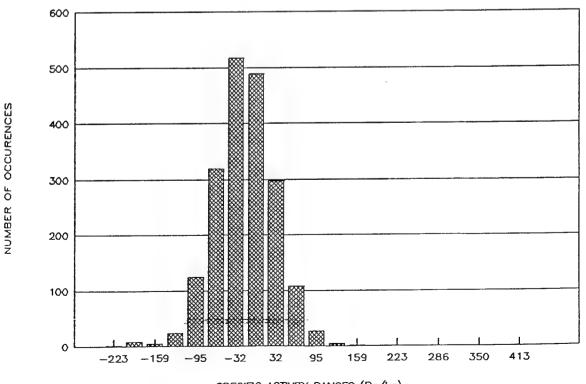
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 21-Jun-93



CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 21-Jun-93



AVERAGE BACKGROUND COUNT RATE SORTER SOIL DENSITY 1.35 tons/m³ GROUND SOIL DENSITY 1.65 tons/m³ CONTAMINATED CLEAN MASS TOTAL MAXIMUM/SORT MAXIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND DAY PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT PRECIFIC ACTIVITY MAXIMUM/SORT PRECIFIC ACTIVITY MAXIMUM/SORT PRECIFIC ACTIVITY SOR BQ TO BQ/kg	
SORTER SOIL DENSITY 1.35 tons/m³	
CONTAMINATED CLEAN	
MASS TOTAL 0.88 tons 107.7 tons	
MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MAXIMUM/SORT MAXIMU	
MAXIMUM/SORT 66 kg 62.9 kg 55 kg	
MINIMUM/SORT 0.8 kg 55 kg WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 0.70 yd3 85.4 yd3 86.1 yd3/d PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL 13,366 kBq MAXIMUM/SORT 3,952 kBq MINIMUM/SORT 3.4 kBq DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 4,656 kBq 8,211 kBq MAXIMUM/SORT 2508 kBq 17 kBq MAXIMUM/SORT 2508 Bq -15 kBq SPECIFIC ACTIVITY 5,274 Bq/kg 76 Bq/kg	
EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY 13,366 kBq 3,952 kBq 8,211 kBq 17 kBq 17 kBq 18 kBq 17 kBq 18 kBq 19 kBq 10 kBq 10 kBq 11 kBq 12 kBq 13 kBq 14 kBq 15 kBq 16 kBq 17 kBq 17 kBq 18 kBq 18 kBq 18 kBq 19 kBq 10 kBq 10 kBq 11 kBq 11 kBq 12 kBq 13 kBq 14 kBq 15 kBq 16 kBq 17 kBq 17 kBq 18 kBq 18 kBq 18 kBq 19 kBq 18 kBq 18 kBq 18 kBq 18 kBq 19 kBq 18 kBq 1	
EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY 13,366 kBq 3,952 kBq 8,211 kBq 17 kBq 17 kBq 18 kBq 17 kBq 18 kBq 19 kBq 10 kBq 10 kBq 11 kBq 11 kBq 12 kBq 13 kBq 14 kBq 15 kBq 16 kBq 17 kBq 17 kBq 18 kBq 18 kBq 18 kBq 18 kBq 18 kBq 19 kBq 10 kBq 10 kBq 11 kBq 12 kBq 13 kBq 14 kBq 15 kBq 16 kBq 17 kBq 17 kBq 18 kBq 18 kBq 19 kBq 18 kBq 18 kBq 19 kBq 18 kBq 19 kBq 18 kBq 1	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY TOTAL 13,366 kBq 3,952 kBq 8,211 kBq 17 kBq 17 kBq 17 kBq 18 SPECIFIC ACTIVITY TOTAL 13,366 kBq 3,952 kBq 8,211 kBq 17 kBq 17 kBq 18 SPECIFIC ACTIVITY TOTAL 13,366 kBq 3,952 kBq 76 Bq/kg	
TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY 13,366 kBq 3,952 kBq 8,211 kBq 17 kBq 17 kBq 17 kBq 18 SPECIFIC ACTIVITY 5,274 Bq/kg 76 Bq/kg	У
TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY 13,366 kBq 3,952 kBq 8,211 kBq 17 kBq 17 kBq 17 kBq 18 SPECIFIC ACTIVITY 5,274 Bq/kg 76 Bq/kg	
MAXIMUM/SORT 3,952 kBq 3.4 kBq	
MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY 3.4 kBq 4,656 kBq 8,211 kBq 17 kBq 17 kBq -208 Bq -15 kBq 76 Bq/kg	
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY 4,656 kBq 8,211 kBq 17 kBq 17 kBq -208 Bq -15 kBq 76 Bq/kg	
MAXIMUM/SORT 2508 kBq 17 kBq	
MINIMUM/SORT -208 Bq -15 kBq SPECIFIC ACTIVITY 5,274 Bq/kg 76 Bq/kg	
SPECIFIC ACTIVITY 5,274 Bq/kg 76 Bq/kg	
SPECIFIC NOTION	
WORK HISTORY	
WORK DAY START 04:45 AM WORK DAY END 04:30 PM	
PLANT START-UP 04:45 AM PLANT SHUT-DOWN 04:30 PM	
START SOIL PROCESSING 12:00 AM 0510 END SOIL PROCESSING 04:00 PM	
LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr	
WORK HOURS 11.8 hr	
AVAILABLE HOURS 11.8 hr	
ACTUAL PROCESS HOURS (total 20-sec records) 9.59 hr	
2.16 hr	
TOTAL SYSTEM PAUSE 6.45 hr (0.16)	
TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-HP -4.74 hr -4.74 hr -4.74 hr	
START-UP4.74 hr (0,91)	
SHUT-DOWN 0.50 hr	
PLANT PERFORMANCE 81.6%	
PRODUCTIVITY 81.6% ·	
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,927	
NONPROCESS RECORDS (Test, calibration, etc)	
20-SEC PROCESS RECORDS 1,726	
TOTAL SORT 6 MD>0 & MND=0	
NO SORT 1,274 AD=0 & MD=0 & MND>0	
SOME SORT 445 AD>0&0 <md <mndmax&mnd="" <mndmax<="" td=""><td></td></md>	
UNEXPLAINED RECORDS 1	
0 <ad<1kbq &="" md="">0 7 UNEXPLAIN PAUSE</ad<1kbq>	
AD=0 & MD 3	
AD<0 & MD 2 00:00:36 00:00	
ACT_P <5 kBq 34 16.9% 01:45:59 02:20	

201 (ACT_P >0 kBq)

17,260

05:13:33

05:21:33

03:50

05:34

07:19 07:21 08:08 08:10

		2-SEC RECORD	2 MIIN 2	OK 12		201 (ACI_	P 20 KBQ)		•	1).21.33
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR			(05:47:53
		2	DETECTO	RS	36	70.6%			(05:51:13
		3	DETECTO	RS	8	15.7%			(7:17:53
		4	DETECTO	RS	4	7.8%			(7:20:52
		5	DETECTO	RS	3	5.9%			(08:08:32
		6	DETECTO	RS	0	0.0%			(08:10:25
		7	DETECTO	RS	0	0.0%			1	11:49:03
		8	DETECTO	RS	0	0.0%			1	15:59:23
		T	JATO			51				
		NET 2-SEC RE	CORDS WI	TH SORTS		150				
		2-SEC PERIOD	S WITH N	O SORTS		17,110				
		AVG TIME BET	WEEN 2-SI	EC SORTS		230.1 sec				
1-GATE S	ORTS	101	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
			•		•					
3	6	5.9%	-14000	1	-223		4000	9	4.5%	4
2	14	13.9%	-12000	0	-191		8000	69	34.3%	8
3	24	23.8%	-10000	0	-159		12000	30	14.9%	12
4	24	23.8%	-8000	3	-127		16000	21	10.4%	16
5	20	19.8%	-6000	17	-95		20000	13	6.5%	20
6	5	5.0%	-4000	60	-64		24000	8	4.0%	24
7	6	5.9%	-2000	81	-32		28000	7		28
8	2	2.0%	0	125	0		32000	4	2.0%	32
TOTAL	101		2000	135	32		36000	7	3.5%	36
			4000	218	64		40000	4		40
2-GATE S	ORTS	100	6000	310	95		44000	1		44
DETECTR	SORTS	FREQ%	8000	366	127		48000	0		48
8			10000	239	159		52000	0		52
9	9	9.0%	12000	125	191		56000	3		56
10	15	15.0%	14000	36	223		60000	1		60
11	22	22.0%	16000	8	254		64000	3		64
12	19	19.0%	18000	2	286		68000	3		68
13	22	22.0%	20000	0	318		72000	1	0.5%	72
14	9	9.0%	22000	0	350		76000	2		76
15	4	4.0%	24000	0	3 82		80000	0	0.0%	80
TOTAL	100		26000	0	413		84000	1	0.5%	84
			>28000	0	0	:	>84000	14	7.0%	>84
			TOTAL	1726			TOTAL	201		
SUMMARY 1								404		
		CLE EVENTS	202			ONE GATE ON	LT	101		
M	JLTIPART	ICLE EVENTS	408		SORTS BY	TWO GATES		100		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

498

2.00 Empty belt

DISTRIBUTED EVENTS

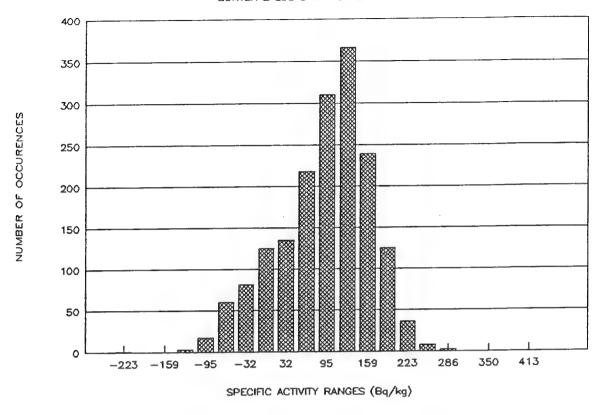
2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

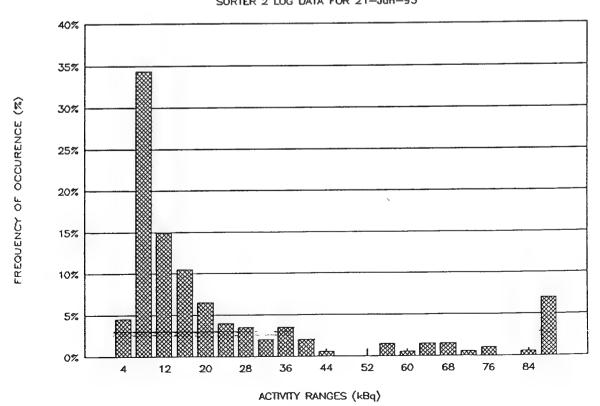
3.00 Test (No process soil)

CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 21-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 21-Jun-93



SORTER 1 22-Jun-93 AVERAGE BACKGROUND COUNT RATE 0.72 ± 0.04 c/sec 1.35 tons/m3 SORTER SOIL DENSITY 1.65 tons/m3 GROUND SOIL DENSITY CONTAMINATED CLEAN 113.3 tons 0.24 tons MASS TOTAL 66 kg 62.9 kg MAXIMUM/SORT 58.9 kg MINIMUM/SORT 0.8 kg 99.8% WEIGHT RECOVERY OR VOLUME RECOVERY 90.0 yd3/day 89.8 yd3 0.19 yd3 EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) 3,134 kBq TOTAL 114 kBq MAXIMUM/SORT MINIMUM/SORT 3.1 kBq DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 1,049 kBq 2,510 kBq 13 kBq 74 kBq MAXIMUM/SORT 0 Bq -11 kBa MINIMUM/SORT 4,395 Bq/kg 22 Bq/kg SPECIFIC ACTIVITY WORK HISTORY 05:00 AM WORK DAY END 04:30 PM WORK DAY START PLANT SHUT-DOWN 04:30 PM 05:00 AM PLANT START-UP 05:37 AM END SOIL PROCESSING 04:05 PM START SOIL PROCESSING 0.0 hr 11:30 AM LUNCH PERIOD LUNCH START 11.5 hr WORK HOURS 11.5 hr AVAILABLE HOURS 10.03 hr ACTUAL PROCESS HOURS (total 20-sec records) 1.47 hr DOWN-TIME TOTAL SYSTEM PAUSE 0.46 hr 0.0 hr NONAVAILABLE HOURS 0.63 hr START-UP SHUT-DOWN 0.40 hr 87.2% PLANT PERFORMANCE 87.2% PRODUCTIVITY 1,974 TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,805 1 MD>0 & MND=0 TOTAL SORT NO SORT 1,692 AD=0 & MD=0 & MND>0 112 AD>0&0<MD<MNDmax&MND<MNDmax SOME SORT 0 UNEXPLAINED RECORDS

Printed on 06/23/93 at 06:42:09 AM

PAUSE

TIME

10:01

10:27

UNEXPLAIN

TIME

06:30:08

0<AD<1kBq & MD>0

ACT P <5 kBq

AD=0 & MD

AD<0 & MD

0

0

32

18.9%

2-SEC CO	UNT PERIODS				18,050			
	2-SEC RECORD	S WITH S	ORTS		169	(ACT_P	>0 kBq)	
	2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR			
	2	DETECTO	RS	38		90.5%		
	3	DETECTO	RS	3		7.1%		
	4	DETECTO	RS	1		2.4%		
	5	DETECTO	RS	0		0.0%		
	6	DETECTO	RS	0		0.0%		
	7	DETECTO	RS	Ø		0.0%		
	8	DETECTO	RS	0		0.0%		
	T	OTAL			42			
	NET 2-SEC RE	CORDS WI	TH SORTS		127			
	2-SEC PERIOD	S WITH N	O SORTS		17,923			
	AVG TIME BET	WEEN 2-S	EC SORTS		284.3	sec		
SORTS	85	ACT_ND	NUMBER	SPEC_A			ACT_P	
R SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	

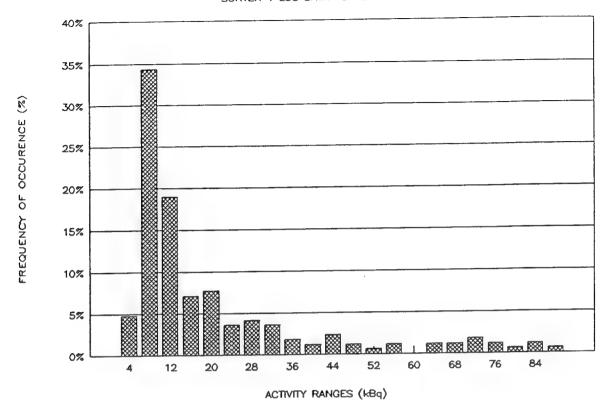
1-GATE S	ORTS	85	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	0	0.0%	-14000	1	-223	4000	8		4
2	8	9.4%	-12000	1	-191	8000	58	34.3%	8
3	10	11.8%	-10000	ā	-159	12000	32	18.9%	12
4	21	24.7%	-8000	9	-127	16000	12	7.1%	16
5	19	22.4%	-6000	69	-95	20000	13	7.7%	20
6	15	17.6%	-4000	137	-64	24000	6	3.6%	24
7	10	11.8%	-2000	201	-32	28000	7	4.1%	28
8	2	2.4%	0	263	0	32000	6	3.6%	32
TOTAL	85		2000	274	32	36000	3	1.8%	36
			4000	326	64	40000	2	1.2%	40
2-GATE SO	ORTS	84	6000	276	95	44000	4	2.4%	44
DETECTR	SORTS	FREQ%	8000	169	127	48000	2	1.2%	48
8			10000	65	159	52000	1	0.6%	52
9	2	2.4%	12000	14	191	56000	2	1.2%	56
10	В	9.5%	14000	3	223	60000	0	0.0%	60
11	14	16.7%	16000	0	254	64000	2	1.2%	64
12	20	23.8%	18000	0	286	68000	2	1.2%	88
13	21	25.0%	20000	0	318	72000	3	1.8%	72
14	15	17.9%	22000	0	350	76000	2	1.2%	76
15	4	4.8%	24000	0	382	80000	1	0.6%	80
TOTAL	84		26000	0	413	84000	2	1.2%	84
			>28000	0	0	>84000	1	0.6%	>84
			TOTAL	1809		TOTAL	169		
SUMMARY 1	TOTALS								
н	T PARTIC	LE EVENTS	168		SORTS BY	ONE GATE ONLY	85		
		CLE EVENTS	49		SORTS BY	TWO GATES	84		
DI	STRIBUTE	EVENTS	83						

REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

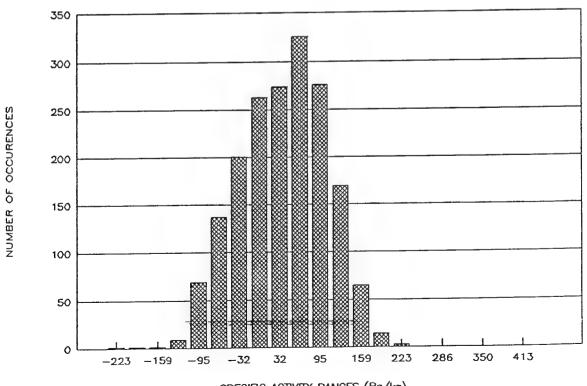
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 22-Jun-93



CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 22-Jun-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2	22-Jun-93									
AVERAGE BACKGROUN	ID COUNT RATE		0.79	±	0.03	/sec				
SORTER SOIL DENSI	TY		1.35 1	tons/m	12					
GROUND SOIL DENSI	TY		1.65 1	tons/m						
					C		INATED	CLEAN		
MASS TOTAL							tons	109.5		
MAXIMUM/SC	ORT						kg	62.9	_	
WINIHUM/SC	ORT					0.8	kg	58.2	Kg	
WEIGHT RECOVERY C	R VOLUME RECOVERY									99.6%
EQUIVALENT SOIL-I	N-GROUND					0.39	λq_2	86.8	yd3	87.2 yd3/day
PARTICLE ACTIVITY	(MAXIMUM ESTIMATE)								
TOTAL		•				2,981	k8q			
MAXIMUM/SC	RT					165	kBq			
MINIMUM/SC						3.8	kBq			
DISDEPSED + PADTI	CLE (REALISTIC EST	IMATE) ACTIV	ITY			1,004	k8q	3,770	kBq	
MAXIMUM/SO						•	kBq	23	kBq	
MINIMUM/SO						0	Bq	-11	kBq	
SPECIFIC A						2,029	Bq/kg	34	Bq/kg	1
WORK HISTORY										
WORK DAY S	TART	05:00 AM			u	ORK DA	AY END	04:30 PM		
PLANT STAR		05:00 AM			P	LANT S	SHUT-DOWN	04:30 PM		
	PROCESSING	05:37 AM			Ε	ND SO	IL PROCESSING	04:06 PM		
LUNCH STAR	τ	11:30 AM			L	UNCH F	PERIOD	0.0	hr	
ų	ORK HOURS						11.5 hr			
	VAILABLE HOURS						11.5 hr			
	CTUAL PROCESS HOURS	S (total 20-	sec rec	ords)			9.72 hr			
D	OWN-TIME						1.78 hr			
T	OTAL SYSTEM PAUSE						0.80 hr			
N	ONAVAILABLE HOURS						0.0 hr			
s	TART-UP						0.63 hr			
s	HUT-DOWN						0.40 hr			
P	LANT PERFORMANCE						84.5%			
P	RODUCTIVITY						84.5%			
TOTAL SOIL PROCES	SING RECORDS (2-SE	and 20-SEC)				1,889			
NONPROCESS RECORD	S (Test, calibratio	on, etc)					5			
20-SEC PRO	CESS RECORDS					1,749				
T	OTAL SORT						0=0MM & 0<0M			
N	O SORT					•	8 0=QM & 0=QA			
	OME SORT						AD>0&0 <md<< td=""><td>max&MND<mi< td=""><td>(Dmax</td><td></td></mi<></td></md<<>	max&MND <mi< td=""><td>(Dmax</td><td></td></mi<>	(Dmax	
U	NEXPLAINED RECORDS					0				
0	<ad<1kbq &="" md="">0</ad<1kbq>	2						UNEXPLAII	4	PAUSE
	AD=0 & ME	3						TIME		TIME
	AD<0 & ME	0						10:37:04		10:01
A	CT_P <5 kBq	20	14.3%			•		11:25:43		10:27

File S2JA0622.WR1

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1

4	2-SEC CO	UNT PERIODS				17,490			1	11:32:14	10:29
		2-SEC RECOR	DS WITH S	ORTS			(ACT P >0 kBq)	1	15:43:34	11:18
		2-SEC RECOR	S WITH P	OSITIVES	IN >1 D	ETECTOR	_		1	16:05:54	11:20
			2 DETECTO	RS	31		93.9%				11:26
			3 DETECTO	RS	2		6.1%				
			4 DETECTO	RS	0		0.0%				
		!	DETECTO	RS	0		0.0%				
			S DETECTO	RS	0		0.0%				
		-	7 DETECTO	RS	0		0.0%				
		1	B DETECTO	RS	0		0.0%				
		1	TOTAL			33					
		NET 2-SEC RE	CORDS WI	TH SORTS		107					
		2-SEC PERIO	S WITH N	O SORTS		17,383					
		AVG TIME BET	WEEN 2-S	EC SORTS		326.9	sec				
1 0475 6	CONTO	71	ACT NO	WINDER	COEC 4		ACT D	COUL	FREQ%	ACT D	
1-GATE S		71	ACT_ND		SPEC_A		ACT_P		rkeua	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)	
1	1	1.4%	-14000	0	-223		4000	5	3.6%	4	
2	4	5.6%	-12000	1	-191		8000	56	40.0%	8	
3	9	12.7%	-10000	4	-159		12000	22	15.7%	12	
4	27	38.0%	-8000	38	-127		16000	9	6.4%	16	
5	15	21.1%	-6000	107	-95		20000	3	2.1%	20	
6	8	11.3%	-4000	194	-64		24000	2	1.4%	24	
7	7	9.9%	-2000	210	-32		28000	7	5.0%	28	
8	0	0.0%	0	170	0		32000	9	6.4%	32	
TOTAL	71		2000	108	32		36000	4	2.9%	36	
			4000	150	64		40000	2	1.4%	40	
2-GATE S	ORTS	69	6000	247	95		44000	2	1.4%	44	
DETECTR	SORTS	FREQ%	8000	230	127		48000	3	2.1%	48	
8			10000	147	159		52000	0	0.0%	52	
9	2	2.9%	12000	76	191		56000	1	0.7%	56	
10	4	5.8%	14000	34	223		60000	1	0.7%	60	
11	16	23.2%	16000	18	254		64000	1	0.7%	64	
12	21	30.4%	18000	11	286		68000	2	1.4%	68	
13	15	21.7%	20000	7	318		72000	1	0.7%	72	
14	8	11.6%	22000	1	350		76000	3	2.1%	76	
15	3	4.3%	24000	1	382		80000	3	2.1%	80	
TOTAL	69		26000	O	413		84000	1	0.7%	84	
			>28000	0	0		>84000	3	2.1%	>84	
			TOTAL	1754			TOTAL	140			
SUMMARY 1											
		CLE EVENTS	146		SORTS BY			71			
		ICLE EVENTS	61		SORTS BY	TWO GA	TES	69			
Di	ISTRIBUT	ED EVENTS	415								

REC CODE EXPLANATION

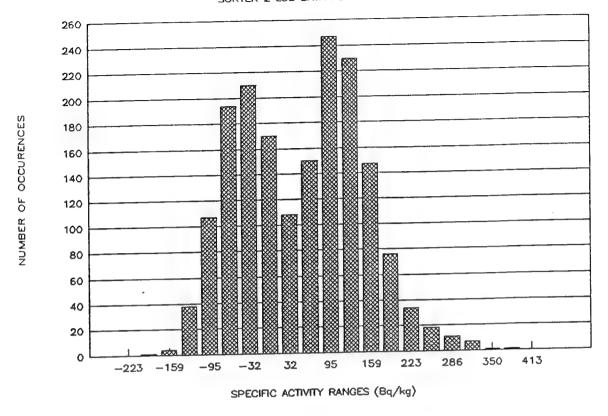
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

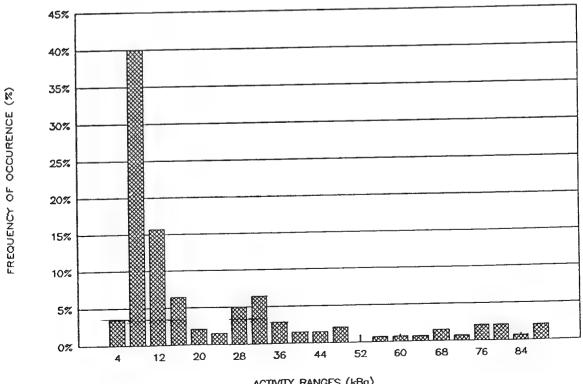
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 22-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 22-Jun-93



SORTER 1 23-Jun-93									
AVERAGE BACKGROUND COUNT RAT	ΤE	0.72	±	0.04	c/sec				
SORTER SOIL DENSITY		1.3	tons/m	12					
GROUND SOIL DENSITY		1.65	tons/m	13					
					CONTAM		CLEAN		
MASS TOTAL						tons	113.3		
MAXIMUM/SORT					63.6	-	60.5	_	
MINIMUM/SORT					0.8	kg	56.8	kg	
WEIGHT RECOVERY OR VOLUME RE	ECOVERY								99.7%
EQUIVALENT SOIL-IN-GROUND					0.25	λq ₃	89.8	yd3	90.1 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM	ESTIMATE)								
TOTAL					2,966	ķBq			
MAXIMUM/SORT					80	kBq			
MINIMUM/SORT					3.1	kBq			
DISPERSED + PARTICLE (REALIS	STIC ESTIMATE) ACTIV	/ITY			1,142	kBq	7,513	kBq	
MAXIMUM/SORT					45	kBq	16	kBq	
MINIMUM/SORT					0	Bq	-8	kBq	
SPECIFIC ACTIVITY					3,561	Bq/kg	66	Bq/kg	
WORK HISTORY									
WORK DAY START	05:00 AM				WORK D	AY END	04:30 PM		
PLANT START-UP	05:00 AM				PLANT :	SHUT-DOWN	04:30 PM		
START SOIL PROCESSING	G 05:28 AM				END SO	IL PROCESSING	03:56 PM		
LUNCH START	11:30 AM				LUNCH	PER I OO	0.0	hr	
WORK HOURS						11.5 hr			
AVAILABLE H	OURS					11.5 hr			
ACTUAL PROC	ESS HOURS (total 20-	-sec r	ecords))		10.43 hr			
DOWN-TIME						1.07 hr			
TOTAL SYSTE	M PAUSE					0.03 hr			
NONAVAILABL	E HOURS					0.0 hr			
START-UP						0.48 hr			
SHUT-DOWN						0.56 hr			
PLANT PERFO	RMANCE					90.7%			
PRODUCTIVIT	Y					90.7%			
TOTAL SOIL PROCESSING RECOR	DS (2-SEC and 20-SE	C)				2,106			
NONPROCESS RECORDS (Test, c						8			
20-SEC PROCESS RECOR					1,878				
TOTAL SORT						MD>0 & MND=0			
NO SORT						AD=0 & MD=0 8			
SOME SORT						AD>0&0 <md<< td=""><td>M> CMM&xem(</td><td>NDmax</td><td></td></md<<>	M> CMM&xem(NDmax	
UNEXPLAINED	RECORDS				0				04405
0 <ad<1k8q &<="" td=""><td>MD>0 0</td><td></td><td></td><td></td><td></td><td></td><td>UNEXPLAI</td><td>N</td><td>PAUSE</td></ad<1k8q>	MD>0 0						UNEXPLAI	N	PAUSE
	0 GM & 0=GA						TIME		TIME
	AD<0 & MD 0 a 43	18.9	4				06:18:55		06:16
ACT_P <5 kB	q 43	10.7	A 0						

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2	2-SEC COUNT PERIODS					18,780					
		2-SEC RECORD	S WITH S	ORTS		228	(ACT_F	>0 kBq)			
		2-SEC RECORD			IN >1 D	ETECTOR					
			DETECTO		48		94.1%				
		3	DETECTO	RS	3		5.9%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			51					
	NET 2-SEC RECORDS WITH SORTS					177					
		2-SEC PERIOD				18,603					
		AVG TIME BET				212.2	sec				
		,									
1-GATE S	ORTS	116	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	4	3.4%	-14000	0	-231			4000	12	5.3%	4
2	11	9.5%	-12000	0	-198			8000	112	49.1%	8
3	24	20.7%	-10000	O	-165			12000	45	19.7%	12
4	18	15.5%	-8000	3	-132			16000	17	7.5%	16
5	16	13.8%	-6000	3	-99			20000	10	4.4%	20
6	18	15.5%	-4000	6	-66			24000	3	1.3%	24
7	21	18.1%	-2000	30	-33			28000	3	1.3%	28
8	4	3.4%	0	131	0			32000	8	3.5%	32
TOTAL	116		2000	302	33			36000	1	0.4%	36
			4000	476	66			40000	G	0.0%	40
2-GATE S	ORTS	112	6000	491	99			44000	1	0.4%	44
DETECTR	SORTS	FREQ%	8000	306	132			48000	0		48
8			10000	110	165			52000	4		52
9	10	8.9%	12000	21	198			56000	3		56
10	17	15.2%	14000	4	231			60000	2		60
11	28	25.0%	16000	3	264			64000	G		64
12	13	11.6%	18000	0	298			68000	4		68
13	19	17.0%	20000	0	331			72000	1		72
14	14	12.5%	22000	0	364			76000	1	0.4%	76
15	11	9.8%	24000	0	397			80000	0		80
TOTAL	112		26000	0	430			84000	1	-	84
			>28000	0	0		>	84000	0	0.0%	>84
			TOTAL	1886				TOTAL	228		
SUMMARY	TOTALS										
H	OT PARTI	CLE EVENTS	238		SORTS B			Υ.	116		
			07		CODITO DI	TIME CO	ATCC		112		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

97

83

2.00 Empty belt

MULTIPARTICLE EVENTS

DISTRIBUTED EVENTS

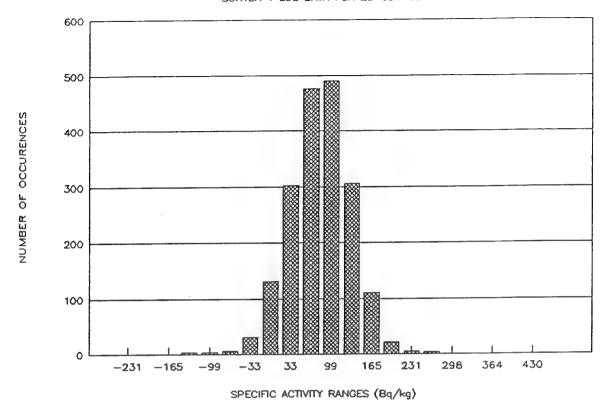
3.00 Test (No process soil)

112

SORTS BY TWO GATES

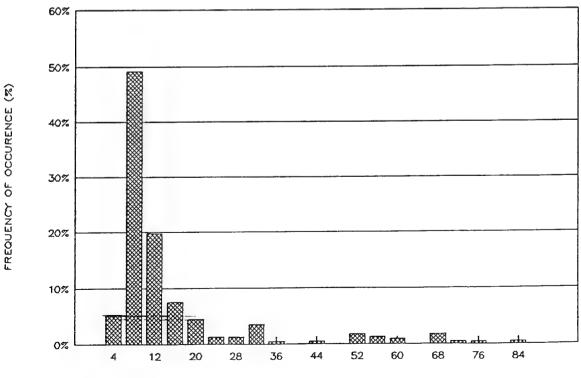
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 23-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 23-Jun-93



NUMBER ACE BACKGOUND COUNT RATE	SORTER 2	23-Jun-93									
SORTER SOIL DENSITY	AVERAGE RACKGROU	IND COUNT RATE		0.79	±	0.03	c/sec				
### CONTAMINATED CLEAN MASS TOTAL MAXIMM/SORT MINIMM/SORT MINIMM/SORT MUSIMM/SORT MUSIMM/SORT MUSIMM/SORT MUSIMM/SORT MUSIMM/SORT MUSIMM/SORT MUSIMM/SORT MUSIMM/SORT MUSIMM/SORT MUXIMM/SORT MUXIMM/S				1.3	tons/m	3					
MAXIMAM/SORT 0.26 tons 113.4 tons 11				1.65	tons/m	5					
MASS TOTAL MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT MAXIMUM/SORT MAXIMUM/											
MAXIMUM/SORT WEIGHT RECOVERY OR VOLUME RECOVERY WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT TOTAL MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/S	MASS TOTAL										
MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT TOTAL MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MORE ACTIVITY MORE ACTIVITY WORK DAY START MORE ACTIVITY WORK DAY START MORE DESSING MORE MISSEN LUNCH START O5:00 AM PLANT SHAT-UP MORE ACTIVITY MORE MORE START O5:00 AM PLANT SHAT-UP MORE MOR	MAXIMUM/S	ORT						_			
Mark matter	MINIMUM/S	CORT					8.0	kg	30.0	Kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT TOTAL SORT TOTAL SORT											99.8%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMM/SORT MINIMM/SORT THE MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MORK DAY START SPECIFIC ACTIVITY MORK DAY START D5:00 AM PLANT START-UP START SOIL PROCESSING MORK HOURS MAXIMALER HOURS AVAILABLE HOURS AVAILABLE HOURS AVAILABLE HOURS MONAVAILABLE HOURS ACTUAL PROCESS NORS (total 20-sec records) MONAVAILABLE HOURS MONAVAILABLE HOURS MONAVAILABLE HOURS ACTUAL PROCESS HORS (total 20-sec records) DMN-TIME TOTAL SYSTEM PAUSE MONAVAILABLE HOURS START-UP SNUT-DOWN PLANT STEIN PAUSE 0.03 hr 11.5 hr 11.5 hr 11.5 hr 11.70 hr 10.43 hr 0.03 hr 0.048 hr 90.7% POOUCTIVITY 90.7% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,049 NOMPROCESS RECORDS (1est, calibration, etc) 20-SEC PROCESS RECORDS (2-SEC and 20-SEC) 1,729 AD=0 & MID=0 1,729 AD=0							0.20	vd³	89.9	yd3	90.1 yd3/day
TOTAL	EQUIVALENT SOIL-	IN-GROUND					0.20	,-		•	
TOTAL	DARTICLE ACTIVIT	Y (MAXIMUM ESTIMATE)								
MAXIHUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MORK MINIMUM/SORT MORK DAY START MO	70741						2,811	kBq			
MINIMUM/SORT 1,067 kBq 10,249 kBq 17 kq 17 k		CORT					76	kBq			
MAXIMUM/SORT 46 kBq 17 kBq 7 k							3.6	k8q			
MAXIMUM/SORT 46 kBq 17 kBq 7 k							1 0/7	400	10 240	kBa	
MAXIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START START 05:00 AM PLANT START-UP START SOIL PROCESSING START 11:30 AM WORK DAY END UNCH PERIOD UNCH	DISPERSED + PART	ICLE (REALISTIC EST	IMATE) ACTIV	/ITY			•	•			
### NINTHUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START 05:00 AM PLANT SHUT-DOWN 04:30 PM PLANT START-UP 05:00 AM PLANT SHUT-DOWN 04:30 PM START SOIL PROCESSING 05:28 AM END SOIL PROCESSING 03:56 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) 10.43 hr DOWN-TIME TOTAL SYSTEM PAUSE 0.03 hr NONAVAILABLE HOURS 0.04 hr START-UP 0.48 hr SHUT-DOWN 0.56 hr PHANT PERFORMANCE PRODUCTIVITY 90.7% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,049 NONPROCESS RECORDS (Test, calibration, etc) 8 TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,729 AD=0 & MND=0 TOTAL SORT 1,729 AD=0 & MND=0 AD=0 & MD 0 0 TIME TIME TIME AD<0 & MD 1 TIME TIME O6:19:36 06:16	MAXIMUM/S	SORT						•			
WORK HISTORY WORK DAY START O5:00 AM								•		•	
WORK DAY START O5:00 AM	SPECIFIC	ACTIVITY					4,101	54) ~3		, ,	
WORK DAY START O5:00 AM	WORK HISTORY										
PLANT START-UP		START	05:00 AM				WORK D	AY END			
MORK HOURS			05:00 AM								
MORK HOURS	START SOI	IL PROCESSING	05:28 AM				END SO	IL PROCESSING			
AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 1,279 AD=0 & MD=0 & MND=0 TIME AD=0 & MD 0 AD=	LUNCH STA	ART	11:30 AM				LUNCH	PER100	0.0	hr	
AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS AD=0 & MD 0 AD=0 & MD		HODE HOUSE						11.5 hr			
ACTUAL PROCESS HOURS (total 20-sec records) DOMN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT UNEXPLAINED RECORDS 0-AD-0 & MD 0 AD-0 & MD 0 AD-0 & MD 0 AD-0 & MD 1 1.07 hr 1.07 hr 1.07 hr 1.07 hr 1.08 hr 1.09 hr								11.5 hr			
DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS AD=0 & MD 0 AD<0 & MD 1 AD<0 & MD 1 AD<0 & MD 1 AD<0 & MD 1 AD<0 & MD 0 AD<0 & MD 1 AD<0 & MD 0 AD<0 & MD 0 AD<0 & MD 1 AD<0 & MD 0 AD 0			S (total 20-	-sec r	ecords))		10.43 hr			
TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 1,729 AD=0 & MD=0 & MND>0 AD=0 & MD AD=0 & MD TIME TIME AD=0 & MD AD=0 & MD TIME TIME TIME AD=0 & MD AD=0 & MD TIME TIME TIME O6:19:36 O6:16			(10000 = 1		-			1.07 hr			
NONAVAILABLE HOURS 0.0 hr								0.03 hr			
START-UP SHUT-DOWN SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 90.7% 90.7% 90.7% 10TAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,049 NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,878 1 MD>0 & MND=0 1,729 AD=0 & MD=0 & MND>0 1,729 AD=0 & MD=0 & MND>0 1,729 AD=0 & MD=0 & MND>0 147 AD>0&0								0.0 hr			
SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 90.7% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,878 TOTAL SORT NO SORT NO SORT 1,729 AD=0 & MD=0 & MND=0 1,729 AD=0 & MD=0 & MND>0 UNEXPLAINED RECORDS 1 AD=0 & MD 0 AD=0 & MD 0 AD=0 & MD 1 O6:19:36 O6:16								0.48 hr			
PLANT PERFORMANCE PRODUCTIVITY 90.7% 90.7% 10TAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,878 1 MD>0 & MND=0 1,729 AD=0 & MD=0 & MND>0 1,729 AD=0 & MD=0 & MND=0 1,729 AD=0 & MD=0 & MND>0 1,729 AD=0 & MD=0 & MND>0 1,729 AD=0 & MD=0 & MND=0 1,729 AD=0 & MD=0 & MD								0.56 hr			
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 AD=0 & MD 0 TIME TIME AD<0 & MD 1 2,049 8 1,878 1 MD>0 & MND=0 1,729 AD=0 & MD=0 & MND>0 1,729 AD=0 & MD=0 & MND>0 147 AD>0&0<ad<4ndmax&mnd<4nndmax 06:16<="" 06:19:36="" pause="" td="" time="" unexplain=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>90.7%</td><td></td><td></td><td></td></ad<4ndmax&mnd<4nndmax></ad<1kbq>								90.7%			
NONPROCESS RECORDS (Test, calibration, etc) 1,878 1,878 1,878 1,878 1,729 AD=0 & MND=0 & MND=0 1,729 AD=0 & MND=0 & MND>0 1,729 AD=0 & MND=0 & MND>0 1,729 AD=0 & MND=0 & MND=0 & MND=0 1,729 AD=0 & MND=0		PRODUCTIVITY						90.7%			
NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS AD=0 & MD			e and 20-ee	C)				2.049			
1,878 1				· ,							
TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS O < AD < 1 kBq & MD > 0 AD < 0 & MD TIME TIME AD < 0 & MD TIME TIME AD < 0 & MD TIME TIME O6:19:36 O6:16			ion, etc)				1.878	3			
1,729 AD=0 & MD=0 & MND>0 SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 AD=0 & MD 0 TIME TIME AD<0.8 MD 1,729 AD=0 & MD=0 & MND>0 UNEXPLAIN PAUSE TIME TIME 06:19:36 06:16</ad<1kbq>	20-SEC PI						-				
SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 AD=0 & MD AD<0 & MD 1 147 AD>0&0 < MNDmax&MND<mndmax 06:16<="" 06:19:36="" pause="" td="" time="" unexplain=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0<dnm 3<="" td=""><td></td><td></td></dnm></td></mndmax></ad<1kbq>									0 <dnm 3<="" td=""><td></td><td></td></dnm>		
UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0										INDmax	
0 <ad<1kbq &="" md="">0</ad<1kbq>			S				1	ı			
AD=0 & MD 0 TIME 11ME AD<0 & MD 1 06:19:36 06:16									UNEXPLA	N	PAUSE
AD<0 & MD 1 06:19:36 06:16									TIME		
47.0%									06:19:36	,	06:16
				17.0	X						

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1

2-SEC COUNT PERIODS 18,780	
2-SEC RECORDS WITH SORTS 171 (ACT_P :	0 kBq)
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR	
2 DETECTORS 39 78.0%	
3 DETECTORS 9 18.0%	
4 DETECTORS 1 2.0%	
5 DETECTORS 1 2.0%	
6 DETECTORS 0 0.0%	
7 DETECTORS 0 0.0%	
8 DETECTORS 0 0.0%	
TOTAL 50	
NET 2-SEC RECORDS WITH SORTS 121	
2-SEC PERIODS WITH NO SORTS 18,659	
AVG TIME BETWEEN 2-SEC SORTS 310.4 sec	

1-GATE S	ORTS	92	ACT_ND	NUMBER	SPEC_A	ACT_	P SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq) (#)		(k8q)
1	2	2.2%	-14000	0	-231	400	0 9	5.3%	4
2	14	15.2%	-12000	0	-198	800	0 66	38.6%	8
3	18	19.6%	-10000	0	-165	1200	0 31	18.1%	12
4	14	15.2%	-8000	0	-132	1600	0 17	9.9%	16
5	18	19.6%	-6000	3	-99	2000	0 4	2.3%	20
6	16	17.4%	-4000	6	-66	2400	0 13	7.6%	24
7	9	9.8%	-2000	3	-33	2800	0 5	1.2%	28
8	1	1.1%	0	54	0	3200	0 4	2.3%	32
TOTAL	92		2000	148	33	3600	0 3	1.8%	36
			4000	370	66	4000	0 4	2.3%	40
2-GATE S	ORTS	79	6000	512	99	4400	0 2	1.2%	44
DETECTR	SORTS	FREQ%	8000	433	132	4800	0 1		48
8			10000	251	165	5200			52
9	6	7.6%	12000	84	198	5600	0 3	1.8%	56
10	10	12.7%	14000	17	231	6000	0 3	1.8%	60
11	16	20.3%	16000	3	264	6400	0 3		64
12	18	22.8%	18000	2	298	6800			68
13	17	21.5%	20000	0	331	7200	0 3	1.8%	72
14	10	12.7%	22000	0	364	7600	0 0	0.0%	76
15	2	2.5%	24000	0	397	8000	0 1	0.6%	80
TOTAL	79		26000	0	430	8400	0 0	0.0%	84
			>28000	0	0	>8400	0 0	0.0%	>84
			TOTAL	1886		TOTA	L 171		
SUMMARY	TOTALS								
H	OT PARTIC	LE EVENTS	164		SORTS BY	ONE GATE ONLY	92		
P	ULTIPARTI	CLE EVENTS	86		SORTS BY	TWO GATES	79		
٥	ISTRIBUTE	D EVENTS	83						

REC CODE EXPLANATION

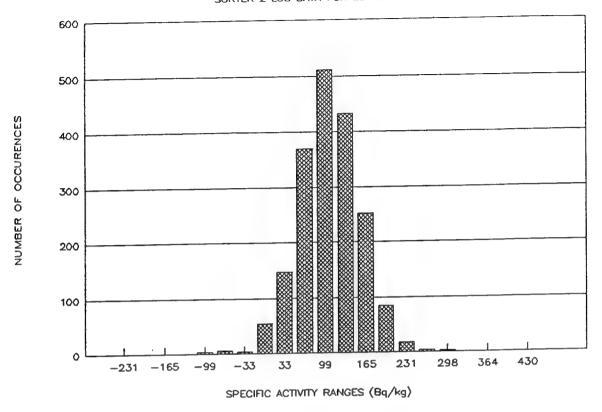
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 23-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 23-Jun-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 84 68 76 52 60 28 36 44 12 20 ACTIVITY RANGES (kBq)

SURIER (24 Juli	, ,				
AVERAGE BACKGROUND COUNT	RATE	0.71 ±	0.03 c/sec		
SORTER SOIL DENSITY		1.25 tons/m ³	ı		
GROUND SOIL DENSITY		1.65 tons/m³	1		
			CONTAMINATED	CLEAN	
MASS TOTAL			0.24 tons	109.4 ton	as
MAXIMUM/SORT			4.4 kg	58.2 kg	
MINIMUM/SORT			0.7 kg	53.9 kg	
EIGHT RECOVERY OR VOLUM	E RECOVERY				99.8%
EQUIVALENT SOIL-IN-GROUN)		0.19 yd ³	86.7 yd³	86.9 yd³/day
ARTICLE ACTIVITY (MAXIM	UM ESTIMATE)				
TOTAL			7,916 kBq		
MAXIMUM/SORT			1,007 kBq		
MINIMUM/SORT			3.2 kBq		
ISPERSED + PARTICLE (RE	ALISTIC ESTIMATE) ACTIVI	ΤΥ	2,495 kBq	7,188 kBq	
MAXIMUM/SORT			633 kBq	14 kBq	
MINIHUM/SORT			0 Bq	-11 kBq	•
SPECIFIC ACTIVITY			10,351 Bq/kg	66 Bq/	'kg
ORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCES	SING 05:31 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
WORK HOU	RS		11.5 hr		
AVAILABL	E HOURS		11.5 hr		
ACTUAL P	ROCESS HOURS (total 20-s	ec records)	10.46 hr		
DOWN-TIM	E		1.04 hr		
TOTAL SY	STEM PAUSE		0.01 hr		
NONAVAIL	ABLE HOURS		0.0 hr		
START-UP			0.53 hr		
SHUT-DO	N		0.47 hr		
PLANT PE	RFORMANCE		91.0%		
PRODUCT I	VITY		91.0%		
OTAL SOIL PROCESSING RE	CORDS (2-SEC and 20-SEC)		2,109		
ONPROCESS RECORDS (Test	, calibration, etc)		7		
20-SEC PROCESS RE	CORDS		1,883		
TOTAL SO	RT		0=0MM & 0<0M 0		
NO SORT			1,702 AD=0 & MD=0		
SOME SOR	T		181 AD>0&0 <md<mn< td=""><td>Dmax&MND<mndma< td=""><td>nx</td></mndma<></td></md<mn<>	Dmax&MND <mndma< td=""><td>nx</td></mndma<>	nx
UNEXPLAT	NED RECORDS		0		
0 <ad<1ke< td=""><td>q & MD>0 1</td><td></td><td></td><td>UNEXPLAIN</td><td>PAUSE</td></ad<1ke<>	q & MD>0 1			UNEXPLAIN	PAUSE
	AD=0 & MO 0			TIME	TIME
	0 OM & 0>dA			11:33:06	07:07
ACT P <5	kBq 40	17.7%			

File S1JA0624.WR1

1

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	10 070	
2-SEC COUNT PERIODS	18,830	
2-SEC RECORDS WITH SORTS	226	(ACT_P >0 kBq
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	
2 DETECTORS	64	78.0%
3 DETECTORS	14	17.1%
4 DETECTORS	3	3.7%
5 DETECTORS	1	1.2%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	82	
	4	

NET 2-SEC RECORDS WITH SORTS 144
2-SEC PERIODS WITH NO SORTS 18,686
AVG TIME BETWEEN 2-SEC SORTS 261.5 sec

1-GATE	SORTS	112	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR		FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
52120111			•						
1	3	2.7%	-14000	0	-241	4000	14	6.2%	4
2	12	10.7%	-12000	0	-206	8000	23	36.3%	В
3	14	12.5%	-10000	3	-172	12000	29	12.8%	12
4	21	18.8%	-8000	3	-137	16000	25	11.1%	16
5	20	17.9%	-6000	2	-103	20000	14	6.2%	20
6	23	20.5%	-4000	3	-69	24000	5	2.2%	24
` 7	14	12.5%	-2000	32	-34	28000	6	2.7%	28
8	5	4.5%	D	117	0	32000	6	2.7%	32
TOTAL	112		2000	323	34	36000	4	1.8%	36
			4000	541	69	40000	6	2.7%	40
2-GATE	SORTS	114	6000	498	103	44000	5	2.2%	44
DETECTR	SORTS	FREQ%	8000	255	137	48000	4	1.8%	48
8			10000	80	172	52000	2	0.9%	52
9	10	8.8%	12000	33	206	56000	1	0.4%	56
10	13	11.4%	14000	2	241	60000	1	0.4%	60
11	14	12.3%	16000	0	275	64000	5	2.2%	64
12	23	20.2%	18000	0	309	68000	2	0.9%	68
13	24	21.1%	20000	0	344	72000	3		72
14	22	19.3%	22000	0	378	76000	0	0.0%	76
15	8	7.0%	24000	0	412	80000	0	0.0%	80
TOTAL	114		26000	0	447	84000	1	0.4%	84
			>28000	0	0	>84000	11	4.9%	>84
			TOTAL	1890		TOTAL	226		
SUMMARY	TOTALS								
		CLE EVENTS	223		SORTS BY	DNE GATE ONLY	112		
		ICLE EVENTS	108		SORTS BY	TWO GATES	114		
	DISTRIBUT	ED EVENTS	0						

REC CODE EXPLANATION

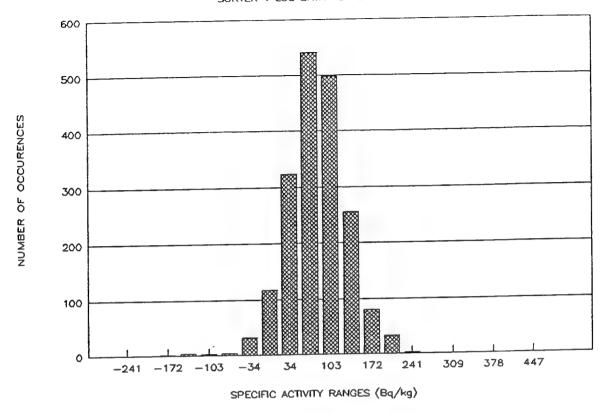
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

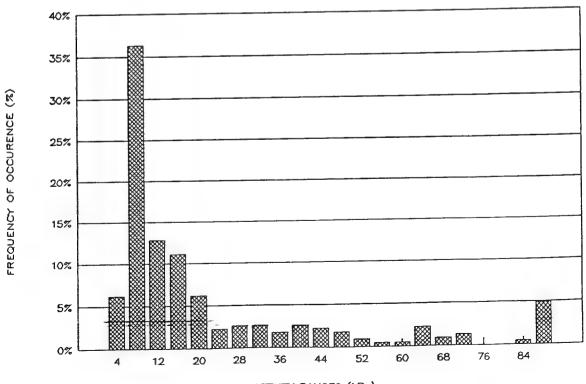
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 24-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 24-Jun-93



AVERAGE BACKGROUND COUNT RATE	SORTER 2 24-Jun-93					
SORTER SOIL DENSITY	AVERAGE RACKGROUND COUNT RATE		0.79 ±	0.03 c/sec		
GROUND SOIL DENSITY 1.65 tons/m³			1.25 tons/m ³			
MASS TOTAL			1.65 tons/m ³			
MAXIMM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT TOTAL TOTAL MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MIN	GROOMD SOLE DENST.			CONTAMINATED	CLEAN	
MAXIMAM/SORT 0.7 kg 53.2 kg	MASS TOTAL			0.31 tons	107.3 to	ons
MINIMUM/SORT 0.70 kg 53.9 kg WEIGHT RECOVERY OR VOLUME RECOVERY 0.25 yd¹ 0.85.1 yd² 05.3 yd¹/day PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL 3,463 kBq MXIMM/SORT 103 kBq MXIMM/SORT 103 kBq MXIMM/SORT 1,205 kBq 9,246 kBq MXIMM/SORT 59 kBq 17 kBq MXIMM/SORT 59 kBq 9,246 kBq MXIMM/SORT 99 kBq MORK DAY START 05:00 AM MORK DAY EMD 04:30 PM PLANT START-UP 05:00 AM PLANT SINIT-DOWN 04:30 PM PLANT START-UP 05:01 AM EM SOIL PROCESSING 04:05 PM LUNCH START 11:30 AM EM SOIL PROCESSING 04:05 PM LUNCH START 11:30 AM EM SOIL PROCESSING 04:05 PM LUNCH START 11:30 AM EM SOIL PROCESSING 04:05 PM LUNCH START 11:30 AM EM SOIL PROCESSING 04:05 PM LUNCH START 11:30 AM EM SOIL PROCESSING 04:05 PM LUNCH PERIOD 0.0 hr MORK DAY START 0.00 M PLANT SINIT-DOWN 0.0 hr MORK DAY START 0.00 M PLANT SINIT-DOWN 0.0 hr MORK DAY START 0.00 M PLANT SINIT-DOWN 0.0 hr MORK DAY START 0.00 M PLANT SINIT-DOWN 0.0 hr MORK DOWN-TIME 11:30 AM EM SOIL PROCESSING 04:05 PM MORK DAY START 0.00 M PLANT SINIT-DOWN 0.0 hr MORAVAILABLE HOURS 11.5 hr MORAVAILABLE HOURS 0.03 hr MORAVAILABLE HOURS 0.03 hr MORAVAILABLE HOURS 0.03 hr MORAVAILABLE HOURS 0.03 hr MORAVAILABLE HOURS 0.05 hWD-0 MORAVAILABLE HOURS 0.05 HWD-0 MORAVAILABLE HOURS 1.849 MORAVAILABLE HOURS 0.05 HWD-0 MORAVAILABLE HOURS 0.04 HWD-0 MORAVAILABLE HOUR				61.1 kg	58.2 kg	
EQUIVALENT SOIL-IN-GROUND 0.25 yd² 85.1 yd² 85.3 yd²/day PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT 103 kBq 3.7 kBq 0.15PERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MORK DAY START SPECIFIC ACTIVITY WORK DAY START OS:00 AM MORK DAY START WORK DAY START MORK DAY START MORK DAY START OS:00 AM PLANT START-UP MORK DAY START MORK DAY ST				0.7 kg	53.9 kg	
EQUIVALENT SOIL-IN-GROUND 0.25 yd² 85.1 yd² 85.3 yd²/day PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT 103 kBq 3.7 kBq 0.15PERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MORK DAY START SPECIFIC ACTIVITY WORK DAY START OS:00 AM MORK DAY START WORK DAY START MORK DAY START MORK DAY START OS:00 AM PLANT START-UP MORK DAY START MORK DAY ST						00.7%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK DAY START PLANT START-UP START SOIL PROCESSING LUNCH START MORK HOURS AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE MONAVAILABLE HOURS START-UP START-UP START-UP DOWN-TIME TOTAL SYSTEM PAUSE MONAVAILABLE HOURS START-UP START-UP START-UP START-UP START-UP START-UP DOWN-TIME TOTAL SYSTEM PAUSE MONAVAILABLE HOURS O. 0 hr START-UP START-UP START-UP START-UP START-UP OUN-TIME TOTAL SYSTEM PAUSE MONAVAILABLE HOURS START-UP 11.5 hr 11.5	WEIGHT RECOVERY OR VOLUME RECO	OVERY			05.4	
TOTAL MAXIMUM/SORT HINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK DAY START D5:00 AM PLANT SHUT-DOWN PLANT START-UP O5:00 AM PLANT SHUT-DOWN START SOIL PROCESSING O5:31 AM END SOIL PROCESSING MORK HOURS AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN NONAVAILABLE HOURS START-UP SHUT-DOWN NONAVAILABLE HOURS START-UP SHUT-DOWN START-UP SHUT-DOWN O4:30 PM LUNCH PERIOD O-25 hr NONAVAILABLE HOURS O-25 hr NONAVAILABLE HOURS START-UP SHUT-DOWN O4:30 PM LUNCH PERIOD O-10 hr TOTAL SYSTEM PAUSE O-25 hr NONAVAILABLE HOURS O-25 hr NONAVAILABLE HOURS O-35 hr SHUT-DOWN O4:41 hr PLANT SHUT-DOWN O4:41 hr PLANT SHUT-DOWN O4:41 hr PLANT SHUT-DOWN O5:50 PM LUNCH PERIOD O-35 hr NONAVAILABLE HOURS O-40 kmid-0 TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,016 NONPROCESS RECORDS (Test, calibration, etc) 18 20-SEC PROCESS RECORDS TOTAL SORT NON SORT NON SORT SOME SORT O4-02-KBQ & MOD-0 2 UNEXPLAINE PAUSE TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TOTAL SOLL PROCESSING PAUSE TOTAL SOLL PR	EQUIVALENT SOIL-IN-GROUND			0.25 Aq.	65.1 YC	1. 93.3 Ad. \day
TOTAL MAXIMUM/SORT HINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK DAY START D5:00 AM PLANT SHUT-DOWN PLANT START-UP O5:00 AM PLANT SHUT-DOWN START SOIL PROCESSING O5:31 AM END SOIL PROCESSING MORK HOURS AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN NONAVAILABLE HOURS START-UP SHUT-DOWN NONAVAILABLE HOURS START-UP SHUT-DOWN START-UP SHUT-DOWN O4:30 PM LUNCH PERIOD O-25 hr NONAVAILABLE HOURS O-25 hr NONAVAILABLE HOURS START-UP SHUT-DOWN O4:30 PM LUNCH PERIOD O-10 hr TOTAL SYSTEM PAUSE O-25 hr NONAVAILABLE HOURS O-25 hr NONAVAILABLE HOURS O-35 hr SHUT-DOWN O4:41 hr PLANT SHUT-DOWN O4:41 hr PLANT SHUT-DOWN O4:41 hr PLANT SHUT-DOWN O5:50 PM LUNCH PERIOD O-35 hr NONAVAILABLE HOURS O-40 kmid-0 TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,016 NONPROCESS RECORDS (Test, calibration, etc) 18 20-SEC PROCESS RECORDS TOTAL SORT NON SORT NON SORT SOME SORT O4-02-KBQ & MOD-0 2 UNEXPLAINE PAUSE TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TIME TOTAL SOLL PROCESSING PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TIME TOTAL SOLL PROCESSING PAUSE TIME TIME TOTAL SOLL PROCESSING PAUSE TOTAL SOLL PR	PARTICLE ACTIVITY (MAXIMUM EST	(IMATE)				
MAXINUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 1,205 kBq 9,246 kBq 17 kBq 18 Bq 19 Bq 19 Bq 10 Bq		•		3,483 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 1,205 kBq 9,246 kBq 17 kBq 17 kBq 17 kBq 17 kBq 18 - 447 Bq 9,246 kBq 9,246 kBq 18 Bq/kg 86 Bq/kg WORK DAY START 95 EQ Bq/kg WORK DAY START 95:00 AM 90 MORK DAY END 91 MORK DAY START 95:00 AM 90 MORK DAY END 91 MORK DAY START 95:00 AM 90 MORK DAY END 91 MORK DAY START 95:00 AM 90 MORK DAY END 91 MORK DAY E	•			103 kBq		
MAXIMUM/SORT S9 kBq 17 k				3.7 kBq		
MAXIMUM/SORT S9 kBq 17 k						
MORK HISTORY	DISPERSED + PARTICLE (REALISTI	C ESTIMATE) ACTIV	ITY	•	•	·
SPECIFIC ACTIVITY 3,892 Bq/kg 86 Bq/kg	MAXIMUM/SORT			•		·
WORK HISTORY MORK DAY START 05:00 AM	MINIMUM/SORT			•		•
WORK DAY START O5:00 AM	SPECIFIC ACTIVITY			3,892 Bq/kg	86 80	/kg
WORK DAY START O5:00 AM	WORK HISTORY					
PLANT START-UP 05:00 AM PLANT SHUT-DOWN 04:30 PM START SOIL PROCESSING 05:31 AM END SOIL PROCESSING 04:05 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr WORK HOURS 11:50 hr AVAILABLE HOURS 11.5 hr AVAILABLE HOURS 11.5 hr DOWN-TIME 1.23 hr TOTAL SYSTEM PAUSE 0.23 hr NONAVAILABLE HOURS 0.00 hr START-UP 0.53 hr SHUT-DOWN 0.41 hr PLANT PERFORMANCE 89.3% PRODUCTIVITY 89.3% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,016 NONPROCESS RECORDS 1,849 TOTAL SORT 1,705 AD=0 & MND=0 NO SORT 1,705 AD=0 & MND=0 NONDROX AD=0 & MD 0 UNEXPLAIN PAUSE UNEXPLAINED RECORDS 0.20 UNEXPLAIN PAUSE TIME TIME TIME AD=0 & MD=0 & MD=0 UNEXPLAIN PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME AD=0 & MD=0 & M		05:00 AH		WORK DAY END	04:30 PM	
LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr	PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	04:30 PM	
WORK HOURS	START SOIL PROCESSING	05:31 AM		END SOIL PROCESSING	04:05 PM	
AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SOIL PROCESSING RECORDS 20-SEC PROCESS RECORDS NONPROCESS RECORDS TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 UNEXPLAINED RECORDS O AD-0 & MD O TIME TIM	LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SOIL PROCESSING RECORDS 20-SEC PROCESS RECORDS NONPROCESS RECORDS TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 < AD=0 & MD>0 UNEXPLAIN PAUSE TIME	HODE HOUSE			11.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records) ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY DOWN-TIME TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,016 NONPROCESS RECORDS TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 <ad<1rbq &="" md="">0 TIME TIME TIME TIME TIME TIME TIME TIME TIME DOWN-TIME 1.23 hr 1.24 hr 1.25 hr 1.25 hr 1.26 hr 1.27 hr 1.28 hr 1.28 hr 1.28 hr 1.29 hr 1.29 hr 1.41 hr 2.40 - 34 hr 1.41 hr 2.40 - 34 hr 2.41 hr 2.41</ad<1rbq>						
DOMN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,016 NONPROCESS RECORDS (Test, calibration, etc) 18 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0-AD-1kBq & MD>0 2			sec records)			
TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT NO SORT UNEXPLAINED RECORDS 0-AD-1kBq & MD>0 2 UNEXPLAIN PAUSE AD=0 & MD TIME TIME TIME TIME TIME TIME O7-67				1.23 hr		
NONAVAILABLE HOURS		AUSE		0.23 hr		
START-UP SHUT-DOWN O.41 hr PLANT PERFORMANCE PRODUCTIVITY 89.3% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,016 NONPROCESS RECORDS (Test, calibration, etc) 18 20-SEC PROCESS RECORDS 1,849 TOTAL SORT 2 HD>0 & MND=0 NO SORT 1,705 AD=0 & MD=0 & MND>0 UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 2 UNEXPLAIN PAUSE TIME TIME TIME OTAL SORT AD=0 & MD OTAL SORT OTAL SORT</ad<1kbq>				0.0 hr		
SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 89.3% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,016 NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,849 TOTAL SORT 2 HD>0 & MND=0 NO SORT 1,705 AD=0 & MD=0 & MND>0 SOME SORT UNEXPLAINED RECORDS 0 <				0.53 hr		
PLANT PERFORMANCE PRODUCTIVITY 89.3% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 AD=0 & MD>0 TIME TIME TIME TIME 77.07	SHUT-DOWN			0.41 hr		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0-AD-1kBq & MD>0 AD=0 & MD 2,016 1,849 2 MD>0 & MND=0 1,705 AD=0 & MND=0 1,705 AD=0 & MD=0 & MND>0 142 AD>0&0-4MD-MNDmax&MND-MNDmax UNEXPLAINED RECORDS 0 UNEXPLAIN PAUSE TIME TIME		NCE		89.3%		
NONPROCESS RECORDS (Test, calibration, etc) 18	PRODUCTIVITY			89.3%		
NONPROCESS RECORDS (Test, calibration, etc) 18		42 000 and 20-000		2 016		
20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 AD=0 & MD 2 HD>0 & MND=0 1,705 AD=0 & MD=0 & MND>0 142 AD>0&0<4MD<4MNDmax&MND<4MNDmax UNEXPLAIN PAUSE TIME TIME TIME TIME</ad<1kbq>			,			
TOTAL SORT NO SORT 1,705 AD=0 & MND=0 1,705 AD=0 & MND>0 SOME SORT 142 AD>0&0<4MD<4MNDmax&MND<4MNDmax UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 2 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME</ad<1kbq>		bration, etc)				
1,705 AD=0 & MD=0 & MND>0						
SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 2 UNEXPLAIN AD=0 & MD 0 TIME TIME</ad<1kbq>				_	MND>0	
UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0 AD = 0 & MD				•		ax
0 <ad<1kbq &="" md="">0 2 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME</ad<1kbq>		CORDS				
AD=0 & MD 0 TIME TIME					UNEXPLAIN	PAUSE
27.70.47 07.07					TIME	TIME
					07:39:47	07:07
ACT_P <5 kBq 22 13.2% 13:52:34 12:24			13.2%		13:52:34	12:24

File S2JA0624.WR1

Printed on 06/25/93 at 10:19:53 AM

29

1

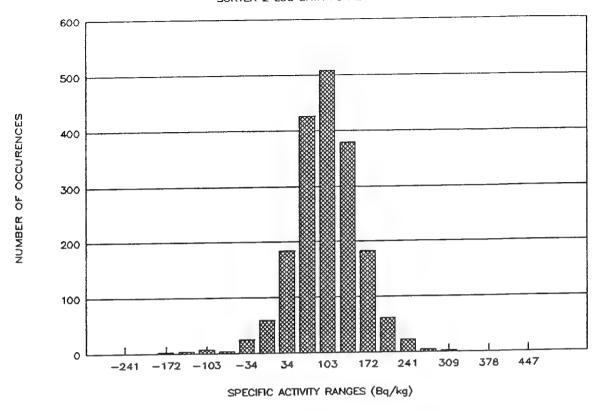
	2-SEC CO	UNT PERIODS				18,490				1	6:04:54	13:44
		2-SEC RECORD	S WITH S	ORTS			(ACT_P	>0 kBq)				
		2-SEC RECORE			IN >1 D	ETECTOR	_					
			2 DETECTO		36		92.3%					
			3 DETECTO		3		7.7%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			7 DETECTO		0		0.0%					
		8	DETECTO	RS	0		0.0%					
		1	TOTAL			39						
		NET 2-SEC RE	CORDS WI	TH SORTS		128						
		2-SEC PERIOD				18,362						
		AVG TIME BET				288.9	sec					
1-GATE	SORTS	84	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTI		FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
1	3	3.6%	-14000	0	-241			4000	4	2.4%	4	
2	12	14.3%	-12000	0	-206			8000	63	37.7%	8	
3	16	19.0%	-10000	2	-172			12000	21	12.6%	12	
4	18	21.4%	-8000	3	-137			16000	14	8.4%	16	
5	13	15.5%	-6000	7	-103			20000	10	6.0%	20	
6	12	14.3%	-4000	3	-69			24000	8	4.8%	24	
7	8	9.5%	-2000	24	-34			28000	7	4.2%	28	
8	2	2.4%	0	58	0			32000	4	2.4%	32	
TOTAL	84		2000	184	34			36000	8	4.8%	36	
			4000	426	69			40000	5	3.0%	40	
2-GATE	SORTS	83	6000	508	103			44000	1	0.6%	44	
DETECT	R SORTS	FREQ%	8000	379	137			48000	1	0.6%	48	
8			10000	183	172			52000	1	0.6%	52	
9	10	12.0%	12000	61	206			56000	3	1.8%	56	
10	11	13.3%	14000	22	241			60000	2	1.2%	60	
11	18	21.7%	16000	5	275			64000	0	0.0%	64	
12	16	19.3%	18000	2	309			68000	2	1.2%	68	
13	12	14.5%	20000	0	344			72000	6	3.6%	72	
14	11	13.3%	22000	0	378			76000	1	0.6%	76	
15	5	6.0%	24000	0	412			80000	1	0.6%	80	
TOTAL	83		26000	0	447			84000	2	1.2%	84	
			>28000	0	0			84000	3	1.8%	>84	
			TOTAL	1867				TOTAL	167			
SUMMARY	Y TOTALS											
		ICLE EVENTS	164		SORTS BY			Υ	84			
		TICLE EVENTS	93		SORTS BY	TWO GA	ITES		83			
	DISTRIBU	TED EVENTS	166									

REC CODE EXPLANATION

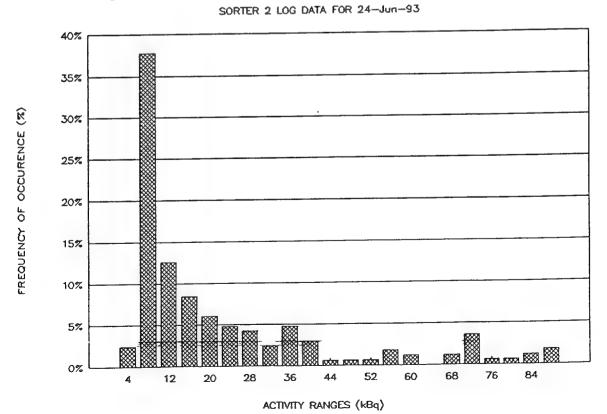
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 24-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES



	07				
SORTER 1 25-Ju	un-93				
AVERAGE BACKGROUND COL	UNT RATE		.04 c/sec		
SORTER SOIL DENSITY		1.25 tons/m ³			
GROUND SOIL DENSITY		1.65 tons/m ³			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.28 tons	101.5 ton	S
MAXIMUM/SORT			61.1 kg	58.2 kg	
MINIMUM/SORT			0.7 kg	54.6 kg	
WEIGHT RECOVERY OR VO	LUME RECOVERY				99.7%
EQUIVALENT SOIL-IN-GRO			0.22 yd3	80.4 yd ³	80.7 yd3/day
PARTICLE ACTIVITY (MA)	VIMIM ESTIMATE)				
	KINON ESTIMATE)		3,266 kBq		
TOTAL MAYINI (SOPT			146 kBq		
MAXIMUM/SORT			3.2 kBq		
MINIMUM/SORT					
NICOFOCEN & DADTICLE	(REALISTIC ESTIMATE) ACT	IVITY	1,161 kBq	6,631 kBc	Ī
MAXIMUM/SORT	furureatta rattimiel vat		81 kBq	13 kBq	ī
MINIMUM/SORT			0 Bq	-10 kBq	t
SPECIFIC ACTIV	ITY		4,097 Bq/kg	65 Bq/	kg
SPECIFIC NOTES	• • • • • • • • • • • • • • • • • • • •				
ORK HISTORY				04 70 04	
WORK DAY START			WORK DAY END	04:30 PM	
PLANT START-UP			PLANT SHUT-DOWN	03:30 PM	
START SOIL PRO	CESSING 05:25 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
WORK (HOURS		11.5 hr	•	
AVAIL	ABLE HOURS		10.5 hr		
ACTUA	L PROCESS HOURS (total 2	0-sec records)	9.71 hr		
DOWN-			0.79 hr		
TOTAL	SYSTEM PAUSE		0.01 hr		
NONAV	AILABLE HOURS		1.0 hr		
START			0.43 hr		
SHUT-	DOWN		0.36 hr		
	PERFORMANCE		92.5%		
PRODU	CTIVITY		84.4%		
TOTAL SOIL PROCESSING	RECORDS (2-SEC and 20-S	EC)	1,939		
	est, calibration, etc)		3		
20-SEC PROCESS			1,748		
TOTAL			1 MD>0 & MND=	0	
NO SO			1,577 AD=0 & MD=0	& MND>0	
SOME			170 AD>0&0≪HD≪HI		x
	LAINED RECORDS		0		
	1kBq & MD>0 2			UNEXPLAIN	PAUSE
V 1/10 1	AD=0 & MD 1			TIME	TIME
		-		01 15 13	14:26
	AD<0 & MD 0			06:45:42	14:20

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2-SEC COUNT PERIODS	17,	480	14:27:20
2-SEC RECORDS WITH SORTS		191 (ACT_P >0 kBq)	
2-SEC RECORDS WITH POSITIVES I	N >1 DETEC	TOR	
2 DETECTORS	46	92.0%	
3 DETECTORS	4	8.0%	
4 DETECTORS	0	0.0%	
S DETECTORS	0	0.0%	
6 DETECTORS	0	0.0%	
7 DETECTORS	0	0.0%	
8 DETECTORS	0	0.0%	
TOTAL		50	
NET 2-SEC RECORDS WITH SORTS		141	
2-SEC PERIODS WITH NO SORTS	17,	.339	
AVG TIME BETWEEN 2-SEC SORTS	2	7.9 sec	

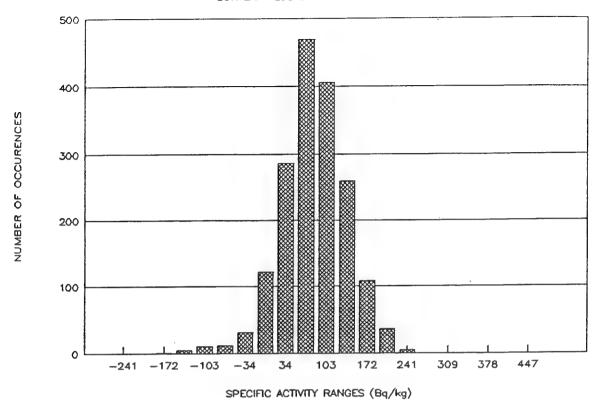
1-GATE S	nrts	85	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	_ (Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
							-	7 79	4
1	O	0.0%	-14000	0	-241	4000	7	3.7%	8
Z	7	8.2%	-12000	0	-206	8000	79	41.4%	
3	19	22.4%	-10000	1	-172	12000	35	18.3%	12 16
4	18	21.2%	-8000	5	-137	16000	16	8.4%	
5	16	18.8%	-6000	11	-103	20000	11	5.8%	20
6	13	15.3%	-4000	12	-69	24000	7	3.7%	24
7	8	9.4%	-2000	31	-34	28000	2	1.0%	28
8	4	4.7%	0	122	0	32000	4	2.1%	32
TOTAL	85		2000	286	34	36000	5	2.6%	36
TOTAL			4000	469	69	40000	7	0.5%	40
2-GATE S	OPTS	106	6000	406	103	44000	2	1.0%	44
DETECTR	SORTS	FREQ%	8000	259	137	48000	4	2.1%	48
8 8	30113	1110	10000	108	172	52000	4	2.1%	52
9	4	3.8%	12000	36	206	56000	2	1.0%	56
10	15	14.2%	14000	5		60000	1	0.5%	60
11	22	20.8%	16000	0		64000	0	0.0%	64
	18	17.0%	18000	0	309	68000	1	0.5%	68
12 13	20	18.9%	20000	0		72000	6	3.1%	72
	15	14.2%	22000	0		76000	0	0.0%	76
14		11.3%	24000	0		80000	1	0.5%	80
15	12	11.3%	26000	0		84000	0	0.0%	84
TOTAL	106		>28000	0		>84000	3	1.6%	>84
				1751		TOTAL	191		
			TOTAL	1731					
SUMMARY			207		CONTC DV	ONE GATE ONLY	85		
	OT PARTICE		203				106		
	ULTIPARTIC		102		20K12 B1	TWO GATES	.30		
C	ISTRIBUTED	EVENTS	83						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty beit

SORTER 1 LOG DATA FOR 25-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 25-Jun-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 68 76 84 12 20 28 36 52 60

SORTER 2 25-Jun-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0	.02 c/sec		
SORTER SOIL DENSITY	1.25 tons/m ³			
GROUND SOIL DENSITY	1.65 tons/m ³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.47 tons	74.2 ton	S
MAXIMUM/SORT		61.1 kg	58.2 kg	
MINIMUM/SORT		0.7 kg	53.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.4%
EQUIVALENT SOIL-IN-GROUND		0.38 yd³	58.8 yd³	59.2 yd'/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	•			
TOTAL		4,932 kBq		
MAXIMUM/SORT		471 k8q		
MINIMUM/SORT		2.8 kBq		
		4 57 / Lo-	6,168 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	1,574 k8q	0,100 kBq 18 kBq	
MAXIMUM/SORT		226 k8q -2227 Bq	-4 kBq	
MINIMUM/SORT		3,321 Bq/kg	83 Bq/	(a
SPECIFIC ACTIVITY		3,321 BQ/Kg	- CD 607	` 9
LINE LITARY				
WORK HISTORY WORK DAY START	05:00 AH	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:26 AM	END SOIL PROCESSING	03:06 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
LONGII START				
WORK HOURS		11.5 hr		
AVAILABLE HOURS		10.5 hr		
ACTUAL PROCESS HOUR	S (total 20-sec records)	7.13 hr		
DOWN-TIME		3.37 hr		
TOTAL SYSTEM PAUSE		2.58 hr		
NONAVAILABLE HOURS		1.0 hr		
START-UP		0.44 hr		
SHUT-DOWN "		0.39 hr		
PLANT PERFORMANCE		67.9%		
PRODUCTIVITY		62.0%		
		4 4/3		
TOTAL SOIL PROCESSING RECORDS (2-SE		1,442 3		
NONPROCESS RECORDS (Test, calibrati	on, etc)	_		
20-SEC PROCESS RECORDS		1,283 5 MD>0 & MND=0		
TOTAL SORT		1,156 AD=0 & MD=0 &	. พยก>ก	
NO SORT		1,136 AD=0 & HD=0 &		
SOME SORT		0	HUNGINO VINUNG.	•
UNEXPLAINED RECORDS	1	•	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0 AD=0 & M</ad<1kbq>			TIME	TIME
AD <0 & N			10:00:42	11:45
	18 11.3%		11:46:58	12:32
ACT_P <5 kBq	10 11.3%			

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12,830

12:58:49

12:36

۷.	- 2FC COOM!	PEKTOD3				,00-						
	2-	SEC RECORDS	S WITH SO	ORTS		159	(ACT_F	>0 kBq)			4:11:04	12:59
	2-	SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR					4:27:20	14:11
		2	DETECTOR	RS	39		78.0%			1	5:06:32	14:27
		3	DETECTOR	RS	8		16.0%					
		4	DETECTOR	RS	3		6.0%					
		5	DETECTOR	RS	0		0.0%					
		6	DETECTOR	RS	0		0.0%					
		7	DETECTOR	RS	0		0.0%					
		8	DETECTOR	RS	0		0.0%					
		T	DTAL			50)					
	NE	T 2-SEC RE	CORDS WIT	TH SORTS		109	•					
	2-	SEC PERIOD	S WITH NO	SORTS		12,721						
	Α\	G TIME BET	WEEN 2-SE	EC SORTS		235.4	sec					
1-GATE S	npts	81	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTION	333	V			•							
1	3	3.7%	-14000	0	-241			4000	4	2.5%	4	
2	17	21.0%	-12000	0	-206			8000	55	34.6%	8	
3	12		-10000	0	-172			12000	29	18.2%	12	
4	11	13.6%	-8000	0	-137			16000	13	8.2%	16	
5	14	17.3%	-6000	0	-103			20000	8	5.0%	20	
6	10	12.3%	-4000	2	-69		-	24000	4	2.5%	24	
7	12	14.8%	-2000	12	-34			28000	2	1.3%	28	
8	2	2.5%	0	53	0			32000	2	1.3%	32	
TOTAL	81		2000	162	34			36000	5	3.1%	36	
			4000	288	69			40000	6		40	
2-GATE S	ORTS	78	6000	335	103			44000	4	2.5%	44	
DETECTR	SORTS	FREQ%	8000	263	137			48000	4		48	
8			10000	118	172			52000	4		52	
9	7	9.0%	12000	41	206			56000	0		56	
10	11	14.1%	14000	10	241			60000	4	2.5%	60	
11	11	14.1%	16000	1	275			64000	0		64	
12	16	20.5%	18000	1	309			68000	2		68	
13	12	15.4%	20000	0	344			72000	0		72	
14	14	17.9%	22000	0	378			76000	3		76	
15	7	9.0%	24000	0	412			80000	0		80	
TOTAL	78		26000	0	447			84000	1		84	
			>28000	0	0			>84000	9		>84	
			TOTAL	1286				TOTAL	159			
SUMMARY	TOTALS											
H	OT PARTIC	LE EVENTS	156		SORTS BY			LY	81			
			-			7 TIME /	CATEC		78			

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

75

415

2.00 Empty belt

MULTIPARTICLE EVENTS
DISTRIBUTED EVENTS

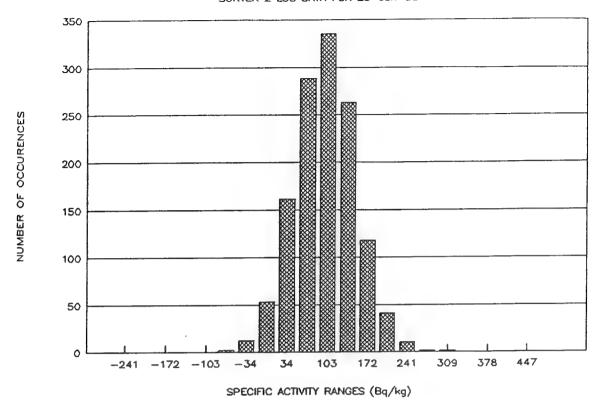
2-SEC COUNT PERIODS

3.00 Test (No process soil)

78

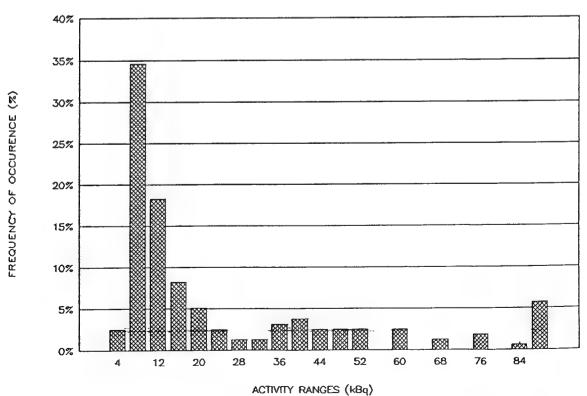
SORTS BY TWO GATES

SORTER 2 LOG DATA FOR 25-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 25-Jun-93



SORTER	R 1 28-Jun-93	3							
AVEDAC	GE BACKGROUND COUNT F	RATE		0.75	± 0.05	c/sec			
	SOIL DENSITY			1.25 t	ons/m³				
	SOIL DENSITY			1.65 t	ons/m³				
akooni	JOIL DENSITY					CONTAMINATED	CLEAN		
MASS T	TOTAL					0.26 tons	108.2	tons	
MASS I	MAXIMUM/SORT					3.6 kg	58.2	kg	
	MINIMUM/SORT					0.7 kg	54.6	kg	
	WINIUGA 2001					•			
UCTONI	RECOVERY OR VOLUME	RECOVERY							99.8%
	LENT SOIL-IN-GROUND					0.21 yd³	85.7	yd³	86.0 yd3/day
540141	ALLEN TOTE IN GROOM					·			
PARTIC	CLE ACTIVITY (MAXIMUN	(ESTIMATE)							
1 111111	TOTAL					4,484 kBq			
	MAXIMUM/SORT					166 kBq			
	MINIMUM/SORT					3.1 kBq			
	FITRINGLY SON!					·			
DISPE	RSED + PARTICLE (REAL	ISTIC ESTIMA	TE) ACTIVI	ΙΤΥ		1,543 k8q	7,156	kBq	
010, 5,	MAXIMUM/SORT					81 kBq	13	kBq	
	MINIMUM/SORT					0 Bq	-5	k8q	
	SPECIFIC ACTIVITY					5,905 Bq/kg	66	8q/kg	
	SECTION ACTION					•			
WORK I	HISTORY					ţ			
	WORK DAY START	05	:00 AM			WORK DAY END	04:30 PM		
	PLANT START-UP	05	:00 AM			PLANT SHUT-DOWN	04:30 PM		
	START SOIL PROCESSI	NG 05	:36 AM			END SOIL PROCESSING	03:57 PM		
	LUNCH START	11	:30 AM			LUNCH PERIOD	0.0	hr	
	` WORK HOURS	5				11.5 hr			
	AVAILABLE	HOURS				11.5 hr			
	ACTUAL PRO	CESS HOURS (total 20-s	sec rec	ords)	10.35 hr			
	DOWN-TIME					1.15 hr			
	TOTAL SYST	EM PAUSE				0.00 hr			
	NONAVAILAE	BLE HOURS				0.0 hr			
	START-UP					0.61 hr			
	SHUT-DOWN					0.55 hr			
	PLANT PERI	ORMANCE				90.0%			
	PRODUCTIVI					90.0%			
TOTAL	SOIL PROCESSING RECO	ORDS (2-SEC a	nd 20-SEC))		2,117			
NONPRO	CESS RECORDS (Test,	calibration,	etc)			5			
	20-SEC PROCESS RECO	ORDS				1,863			
	TOTAL SORT	r				0=0MM & 0<0M 0	}		
	NO SORT					1,660 AD=0 & MD=0	0<0MM &		
	SOME SORT					203 AD>0&0 <md<mn< td=""><td>M> GMM&xamQ</td><td>NDmax</td><td></td></md<mn<>	M> GMM&xamQ	NDmax	
	UNEXPLAINE	ED RECORDS				0			
	0 <ad<1kbq< td=""><td>& MD>0</td><td>1</td><td></td><td></td><td></td><td>UNEXPLAI</td><td>N F</td><td>PAUSE</td></ad<1kbq<>	& MD>0	1				UNEXPLAI	N F	PAUSE
	·	QM & 0=QA	0				TIME		TIME
								_	

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07:35:37 None

AD<0 & MD 0 ACT_P <5 kBq 52 20.5%

2-SEC COUNT PERIODS	18,630)
2-SEC RECORDS WITH SORTS	254	$(ACT_P > 0 kBq)$
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	!
2 DETECTORS	58	86.6%
3 DETECTORS	7	10.4%
4 DETECTORS	1	1.5%
5 DETECTORS	1	1.5%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TATOT	67	7
NET 2-SEC RECORDS WITH SORTS	187	7
2-SEC PERIODS WITH NO SORTS	18,443	3
AVG TIME BETWEEN 2-SEC SORTS	199.3	sec

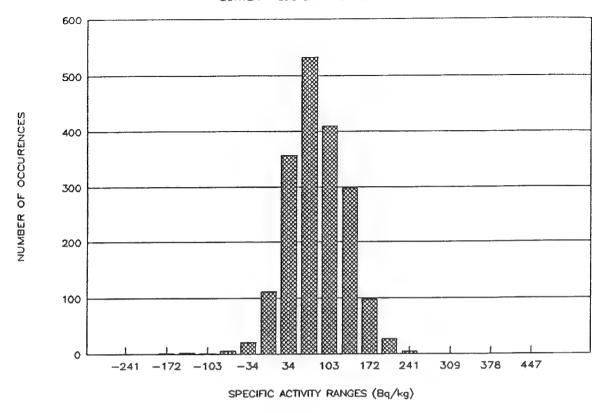
1-GATE S	ORTS	129	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
		7 40	-14000	0	-241	4000	12	4.7%	4
1	4	3.1%		0	-206	8000	112	44.1%	8
2	12	9.3%	-12000	-		12000	37	14.6%	12
3	24	18.6%	-10000	1	-172	16000	19	7.5%	16
4	27	20.9%	8000	2	-137			6.3%	20
5	20	15.5%	-6000	1	-103	20000	16		
6	18	14.0%	-4000	6	-69	24000	5	2.0%	24
7	19	14.7%	-2000	21	-34	28000	8	3.1%	28
8	5	3.9%	0	111	0	32000	6	2.4%	32
TOTAL	129		2000	357	34	36000	0	0.0%	36
			4000	533	69	40000	5	2.0%	40
2-GATE S	ORTS	125	6000	410	103	44000	4	1.6%	44
DETECTR	SORTS	FREQ%	8000	297	137	48000	3	1.2%	48
8			10000	97	172	52000	3	1.2%	52
9	6	4.8%	12000	27	206	56000	1	0.4%	56
10	15	12.0%	14000	5	241	60000	3	1.2%	60
11	28	22.4%	16000	0	275	64000	6	2.4%	64
12	19	15.2%	18000	0	309	68000	3	1.2%	68
13	21	16.8%	20000	0	344	72000	0	0.0%	72
14	25	20.0%	22000	0	378	76000	4	1.6%	76
15	11	8.8%	24000	Ö	412	80000	3	1.2%	80
TOTAL	125		26000	0	447	84000	2	0.8%	84
			>28000	o	0	>84000	2	0.8%	>84
			TOTAL	1868		TOTAL	254		
SUMMARY	TOTALS								
1	OT PARTIC	LE EVENTS	249		SORTS BY	DNE GATE ONLY	129		
		CLE EVENTS	109		SORTS BY	TWO GATES	125		
	ISTRIBUTE		0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

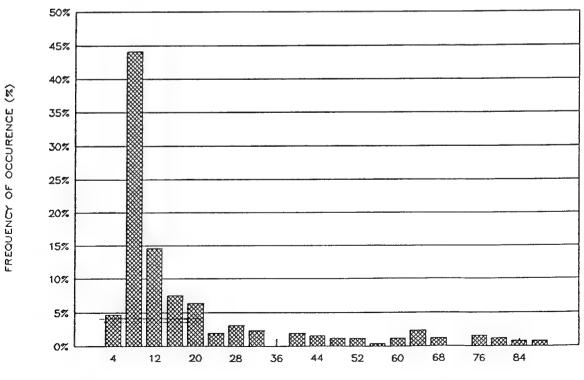
2.00 Empty belt

SORTER 1 LOG DATA FOR 28-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 28-Jun-93



SORTER 2 28-Ju	ın-93						
-							
AVERAGE BACKGROUND COL	INT RATE	0.79	_	0.02 c/sec			
SORTER SOIL DENSITY			tons/m				
GROUND SOIL DENSITY		1.03	tons/iii	CONTAMINATED	CLEAN		
				0.25 tons	108.9	tons	
MASS TOTAL				2.9 kg	58.3		
MAXIMUM/SORT				0.7 kg	55.3	-	
MINIMUM/SORT							
WEIGHT RECOVERY OR VOL	UME RECOVERY						99.8%
EQUIVALENT SOIL-IN-GRO	DAND			0.20 yd³	86.3	Àq ₃	86.5 yd3/da
PARTICLE ACTIVITY (MA)	(IMUM ESTIMATE)						
TOTAL				4,017 kBq			
MAXIMUM/SORT				193 kBq			
MINIMUM/SORT				3.3 k8q			
DICOCOCCO + DARTICIE /	REALISTIC ESTIMATE) ACT	TIVITY		1,498 kBq	11,748	kBq	
MAXIMUM/SORT	veneratio cattenie) vo			136 kBq		kBq	
MINIMUM/SORT				0 Bq	-4	kBq	
SPECIFIC ACTIVI	TY			6,027 Bq/kg	108	Bq/kg	
WORK HISTORY	05:00 AM			WORK DAY END	04:30 PM		
WORK DAY START PLANT START-UP	05:00 AM			PLANT SHUT-DOWN	04:30 PM		
START SOIL PROC				END SOIL PROCESSING	03:59 PM		
LUNCH START	11:30 AM			LUNCH PERIOD	0.0	hr	
HOOK I	ioune.			11.5 hr			
WORK F	BLE HOURS			11.5 hr			
	PROCESS HOURS (total 2	20-sec re	ecords)				
DOWN-T				1.10 hr			
	SYSTEM PAUSE			0.00 hr			
	ILABLE HOURS			0.0 hr			
START-				0.59 hr			
SHUT-D				0.51 hr			
	PERFORMANCE			90.4%			
PRODUC	TIVITY			90.4%			
TOTAL SOIL PROCESSING	RECORDS (2-SEC and 20-5	SEC)		2,076			
NONPROCESS RECORDS (Te				2			
20-SEC PROCESS				1,872			
TOTAL				0 MD>0 & MND=0			
NO SOR				1,664 AD=0 & MD=0			
SOME S				208 AD>0&0 <md<mn< td=""><td>MM> CHM&xemC</td><td>1Dmax</td><td></td></md<mn<>	MM> CHM&xemC	1Dmax	
	AINED RECORDS			0			
0 <ad<1< td=""><td>kBq & MD>0 1</td><td></td><td></td><td></td><td>UNEXPLAIN</td><td></td><td>PAUSE</td></ad<1<>	kBq & MD>0 1				UNEXPLAIN		PAUSE
	AD=0 & MD 0				TIME		TIME
	AD<0 & MD 0				06:35:37	ł	lone
ACT P	<5 kBq 25	12.3	X.				

File S2JA0628.WR1

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1

204 (ACT_P >0 kBq)

18,720

		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	49		86.0%			
		3	DETECTO	RS	6		10.5%			
		4	DETECTO	RS	2		3.5%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		τ	OTAL			57				
		NET 2-SEC RE	CORDS WI	TH SORTS		147				
		2-SEC PER100	S WITH N	O SORTS		18,573				
		AVG TIME BET	WEEN 2-S	EC SORTS		254.7	sec			
1-GATE SO	ORTS	106	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(k8q)
1	5		-14000	0	-240		4000	14	6.9%	4
2	15	14.2%	-12000	0	-206		8000	79	38.7%	8
3	16	15.1%	-10000	0	-172		12000	23	11.3%	12
4	21	19.8%	-8000	0	-137		16000	31	15.2%	16
5	23	21.7%	-6000	1	-103		20000	12	5.9%	20
6	15	14.2%	-4000	2	-69		24000	6	2.9%	24
7	9	8.5%	-2000	4	-34		28000	5	2.5%	28
8	2	1.9%	0	19	0		32000	1	0.5%	32
TOTAL	106		2000	92	34		36000	0	0.0%	36
_			4000	284	69		40000	1	0.5%	40
2-GATE SC		98	6000	501	103		44000	3	1.5%	44
DETECTR	SORTS	FREQ%	8000	466	137		48000	1	0.5%	48
8	4.0		10000	322	172		52000	3	1.5%	52
9	10	10.2%	12000	134	206		56000	5	2.5%	56
10	14	14.3%	14000	40	240		60000	3	1.5%	60
11	18	18.4%	16000	8	274		64000	2	1.0%	64
12	20	20.4%	18000	1	309		68000	2	1.0%	68
13	18	18.4%	20000	0	343		72000	4	2.0%	72 74
14	12	12.2%	22000	0	377		76000	2	1.0%	76
15	6	6.1%	24000	0	412		80000	3	1.5%	80
TOTAL	98		26000	0	446		84000	0	0.0%	84
			>28000	107/	0		>84000	30/	2.0%	>84
SUMMARY T	PLATO		TOTAL	1874			TOTAL	204		
		CLE EVENTS	203		SORTS BY	ONE GAT	E ONLY	106		
		ICLE EVENTS	140		SORTS BY			98		
		ED EVENTS	0			with				

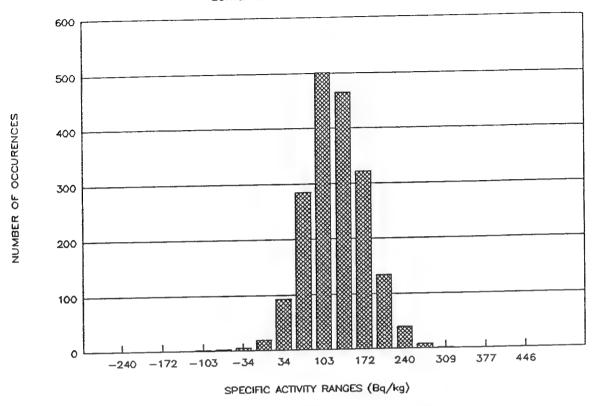
REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

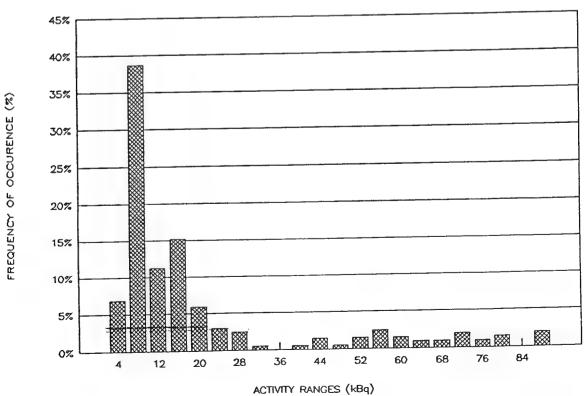
2-SEC RECORDS WITH SORTS

SORTER 2 LOG DATA FOR 28-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 28-Jun-93



SORTER 1 29-J	lun-93									
AVERAGE BACKGROUND CO	OUNT RATE		0.73	±	0.04	c/sec				
SORTER SOIL DENSITY				tons/m	13					
GROUND SOIL DENSITY			1.65	tons/m	13					
andono dota demonstra						CONTAM	INATED	CLEAN		
MASS TOTAL						0.31	tons	98.1	tons	
MAXIMUM/SORT						3.6	kg	58.2	kg	
MINIMUM/SORT						0.7	kg	54.6	kg	
WEIGHT RECOVERY OR VO	LUME RECOVERY									99.7%
EQUIVALENT SOIL-IN-GR	OUND					0.25	yd3	77.7	yd3	78.0 yd³/day
PARTICLE ACTIVITY (MA	XIMUM ESTIMATE)								
TOTAL						4,970	kBq			
MAXIMUM/SORT						133	kBq			
MINIMUM/SORT						2.5	kBq			
	4051110TIO FOT	MATEL ACTIO	VITV			1,824	k@a	6,960	kBa	
DISPERSED + PARTICLE	(KEALISTIC EST	(MAIE) ACII	ATII			•	k8q	-	kBq	
MAXIMUM/SORT							Bq		kBq	
MINIMUM/SORT							Bq/kg		Bq/kg	
SPECIFIC ACTIV	111					7,033	24.49	• • •	-4,	
WORK HISTORY										
WORK DAY START		05:00 AM				WORK D	AY END	04:30 PM		
PLANT START-UP	•	05:00 AM				PLANT :	SHUT-DOWN	04:30 PM		
START SOIL PRO	CESSING	05:25 AM				END SO	IL PROCESSING	04:00 PM		
LUNCH START		11:30 AM				LUNCH	PERIOD	0.0	hr	
WORK	HOURS						11.5 hr			
	ABLE HOURS						11.5 hr			
ACTUA	L PROCESS HOURS	S (total 20	-sec re	ecords)			9.39 hr			
DOWN-	TIME						2.11 hr			
	SYSTEM PAUSE						1.12 hr			
VANON	AILABLE HOURS						0.0 hr			
START							0.42 hr			
SHUT-							0.50 hr			
	PERFORMANCE						81.6% 81.6%			
PRODU	CTIVITY						81.0%			
TOTAL SOIL PROCESSING		and 20-SE	C)				1,981			
NONPROCESS RECORDS (T			-,				24			
20-SEC PROCESS		,,				1,690				
_	SORT					•	MD>0 & MND=0			
NO SO							AD=0 & MD=0 8	O <dam s<="" td=""><td></td><td></td></dam>		
SOME						-	AD>0&0 <md<< td=""><td></td><td>NDmax</td><td></td></md<<>		NDmax	
	LAINED RECORDS					0				
	1kBq & MD>0	0						UNEXPLAI	N I	PAUSE
· 10	AD=0 & ME							TIME		TIME
	AD<0 & MI							None		08:18
ACT P	<5 k8q	56	19.23	4						09:08
	•									

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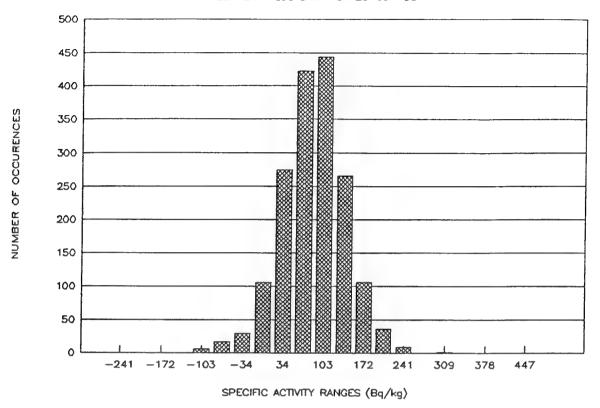
	3 ccc co	INT PERIODS				16,90	0					11:50
		2-SEC RECORD	S HITH S	ORTS				>0 kBq)				
		2-SEC RECORD			IN >1 DE		_					
			DETECTO		72		73.5%					
			DETECTO		21		21.4%					
			DETECTO		4		4.1%					
			DETECTO		1		1.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			OTAL			9	8					
		NET 2-SEC RE		TH SORTS		19	3					
		2-SEC PERIOD				16,70	7					
		AVG TIME BET					1 sec					
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										
1-GATE	SORTS	144	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECT		FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(k8q)	
5212311			•									
1	4	2.8%	-14000	0	-241			4000	15	5.2%	4	
2	18	12.5%	-12000	0	-206			8000	119	40.9%	8	
3	17	11.8%	-10000	0	-172			12000	57		12	
4	28	19.4%	-8000	0	-137			16000	21	7.2%	16	
5	32	22.2%	-6000	6	-103			20000	15	5.2%	20	
· 6	28	19.4%	-4000	16	-69			24000	7		24	
7	13	9.0%	-2000	29	-34			28000	7		28	
8	4	2.8%	0	106	0			32000	2	0.7%	32	
TOTAL	144		2000	274	34			36000	7	2.4%	36	
			4000	422	69			40000	7	2.4%	40	
2-GATE	SORTS	147	6000	444	103			44000	4	1.4%	44	
DETECT	R SORTS	FREQ%	8000	265	137			48000	2		48	
8			10000	106	172			52000	4	1.4%	52	
9	9	6.1%	12000	36	206			56000	3		56	
10	17	11.6%	14000	9	241			60000	3		60	
11	32	21.8%	16000	0	275			64000	5		64	
12	29	19.7%	18000	1	309			68000	4	1.4%	68	
. 13	33	22.4%	20000	0	344			72000	2		72	
14	18	12.2%	22000	0				76000	1	0.3%	76	
15	9	6.1%	24000	0	412			80000	1	0.3%	80	
TOTAL	147		26000	0	447			84000	1	0.3%	84	
			>28000	0	0		3	84000	201	1.4%	>84	
			TOTAL	1714				TOTAL	291			
SUMMAR!	Y TOTALS								411			
		ICLE EVENTS	301		SORTS BY			LŤ	144			
	MULTIPAR	TICLE EVENTS	128		SORTS BY	TWO	GATES		147			
	DISTRIBU	TED EVENTS	0									

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

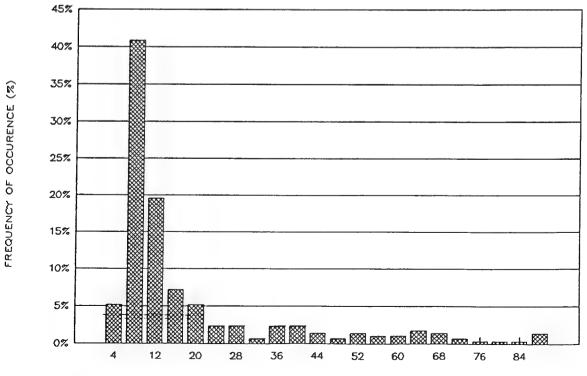
2.00 Empty belt

SORTER 1 LOG DATA FOR 29-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 29-Jun-93



ACTIVITY RANGES (kBq)

SORTER 2 29-Jun-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.	03 c/sec		
SORTER SOIL DENSITY	1.25 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
disable sate and		CONTAMINATED	CLEAN	
MASS TOTAL		0.25 tons	99.5 tons	
MAXIMUM/SORT		4.4 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	53.9 kg	
				99.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.20 yd³	78.9 yd³	79.1 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.20 yu	,	
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		4,713 kBq		
MAXIMUM/SORT		422 kBq		
MINIMUM/SORT		2.8 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATEL ACTIVITY	1,738 kBq	9,874 kBq	
	TINGEY NOTETO	211 kBq	17 kBq	
MAXIMUM/SORT MINIMUM/SORT		0 Bq	-11 kBq	
SPECIFIC ACTIVITY		6,911 Bq/kg	99 Bq/kg	
SPECIFIC ACTIVITY				
WORK HISTORY		ALONG BANG SHO	04:30 PM	
WORK DAY START	05:00 AH	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	05:25 AM	LUNCH PERIOO	0.0 hr	
LUNCH START	11:30 AM	LONCE PERIOD	0.0 111	
WORK HOURS		11.5 hc		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	9.51 hr		
DOWN-TIME		1.99 hr		
TOTAL SYSTEM PAUSE	:	1.12 hr		
NONAVAILABLE HOURS	;	0.0 hr		
START-UP		0.42 hr		
SHUT-DOWN		0.47 hr		
PLANT PERFORMANCE		82.7% 82.7%		
PRODUCTIVITY		02.78		
TOTAL SOIL PROCESSING RECORDS (2-S	SEC and 20-SEC)	1,943		
NONPROCESS RECORDS (Test, calibrat		5		
20-SEC PROCESS RECORDS		1,711		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,520 AD=0 & MD=0 8		
SOME SORT		191 AD>0&0 <md<mn< td=""><td>Omax&MND <mndmax< td=""><td></td></mndmax<></td></md<mn<>	Omax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	os e	0		DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE TIME
AD=0 &	_		TIME	09:08
& 0>0A			None	11:50
ACT_P <5 kBq	31 13.4%			*****

File SZJA0629.WR1

1

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2-SEC COUNT PERIODS	17,	
2-SEC RECORDS WITH SORTS		232 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	TOR
2 DETECTORS	58	90.6%
3 DETECTORS	6	9-4%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL		64
NET 2-SEC RECORDS WITH SORTS		168
2-SEC PERIODS WITH NO SORTS	16,	942
AVG TIME BETWEEN 2-SEC SORTS	20	3.7 sec

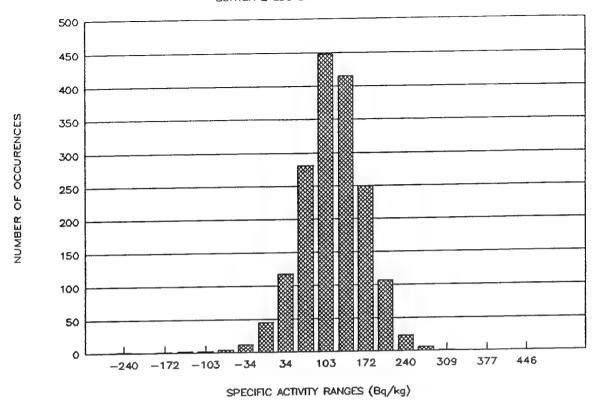
						ACT D	COST	FREQ%	ACT_P
1-GATE S	ORTS	121	ACT_ND	NUMBER	_	ACT_P		LKEGA	(k8q)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(koq)
					2/0	4000	8	3.4%	4
1	6	5.0%	-14000	1	-240	8000	83	35.8%	8
2	24	19.8%	-12000	0	-206		43	18.5%	12
3	24	19.8%	-10000	1	-172	12000		9.5%	16
4	16	13.2%	-8000	5	-137	16000	22		20
5	20	16.5%	-6000	2		20000	23		
6	18	14.9%	-4000	4	-69	24000	11		24
7	11	9.1%	-2000	12	-34	28000	7		28
8	2	1.7%	0	45	0	32000	3		32
TOTAL	121		2000	118	34	36000	1	0.4%	36
			4000	281	69	40000	3		40
2-GATE S	ORTS	111	6000	448	103	44000	4	1.7%	44
DETECTR	SORTS	FREQ%	8000	416	137	48000	1	0.4%	48
8	••••		10000	249	172	52000	0	0.0%	52
9	9	8.1%	12000	107	206	56000	4	1.7%	56
10	21	18.9%	14000	23	240	60000	5	2.2%	60
11	21	18.9%	16000	6	274	64000	3	1.3%	64
12	. 21	18.9%	18000	1	309	68000	0	0.0%	68
13	19	17.1%	20000	0	343	72000	1	0.4%	72
14	14	12.6%	22000	0	377	76000	3	1.3%	76
15	6	5.4%	24000	0	412	80000	1	0.4%	80
TOTAL	111		26000	0	446	84000	1	0.4%	84
TOTAL			>28000	0	0	>84000	5	2.2%	>84
			TOTAL	1716)	TOTAL	232		
SUMMARY	TOTALS								
	HOT PARTICE	E EVENTS	235		SORTS BY	ONE GATE ONLY	121		
	MULTIPARTIC		110			THO GATES	111		
			0						
	DISTRIBUTED	SAEMIS	U						

REC CODE EXPLANATION

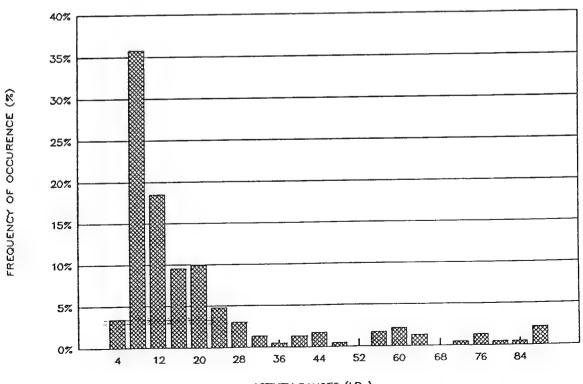
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 29-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES
SORTER 2 LOG DATA FOR 29-Jun-93



SORTER 1 30-Jun-93				
AND DATE	٠	.04 c/sec		
AVERAGE BACKGROUND COUNT RATE		.04 C/SeC		
SORTER SOIL DENSITY	1.25 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³	CONTANINATED	CLEAN	
		CONTAMINATED	59.7 to	nc.
MASS TOTAL		0.16 tons	58.2 kg	15
MAXIMUM/SORT		5.1 kg		
MINIMUM/SORT		0.7 kg	53.1 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.7%
EQUIVALENT SOIL-IN-GROUND		0.13 yd³	47.4 yd	47.5 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		2,271 kBq		
MAXIMUM/SORT		360 kBq		
MINIMUM/SORT		2.4 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	867 kBq	4,520 kBd	1
MAXIMUM/SORT		209 kBq	13 kBc	•
MINIMUM/SORT		0 Bq	-9 kBc	•
SPECIFIC ACTIVITY		5,448 Bq/kg	76 Bq/	
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	11:30 AM	
START SOIL PROCESSING	05:20 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		11.0 hr		
AVAILABLE HOURS		6.5 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	5.72 hr		
DOWN-TIME		0.78 hr		
TOTAL SYSTEM PAUSE		0.00 hr		
NONAVAILABLE HOURS		4.5 hr		
START-UP		0.34 hr		
SHUT-DOWN		0.45 hr		
PLANT PERFORMANCE		87.9%		
PRODUCTIVITY		52.0%		
TOTAL SOIL PROCESSING RECORDS (2-SI	EC and 20-SEC)	1,153		
NONPROCESS RECORDS (Test, calibrat		. 3		
20-SEC PROCESS RECORDS	•	1,029		
TOTAL SORT		0=DMM & 0 <dm 0<="" td=""><td></td><td></td></dm>		
NO SORT		891 AD=0 & MD=0 8	MND>0	
SOME SORT		138 AD>0&0 <md<mnc< td=""><td>max&MND<mndma< td=""><td>x</td></mndma<></td></md<mnc<>	max&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECORDS	S	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & F	10 0		TIME	TIME
AD<0 & 1	10 0		None	None
ACT_P <5 kBq	21 16.9%			

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2-SEC COUNT PERIODS	10,290				
2-SEC RECORDS WITH SORTS	124	$(ACT_P > 0 kBq)$			
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR				
2 DETECTORS	27	81.8%			
3 DETECTORS	6	18.2%			
4 DETECTORS	0	0.0%			
5 DETECTORS	0	0.0%			
6 DETECTORS	0	0.0%			
7 DETECTORS	0	0.0%			
8 DETECTORS	0	0.0%			
TOTAL	33				
NET 2-SEC RECORDS WITH SORTS	91				
2-SEC PERIODS WITH NO SORTS	10,199				
AVG TIME BETWEEN 2-SEC SORTS	226.2	sec			

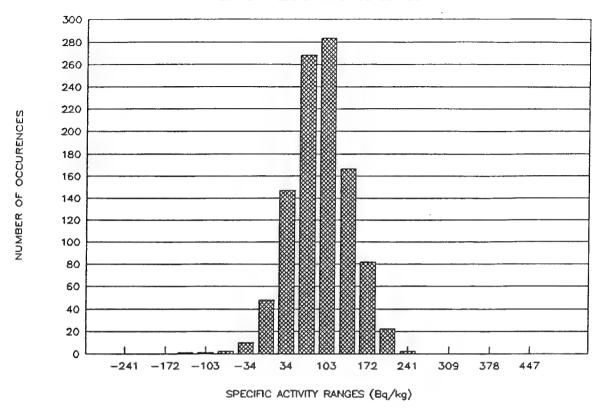
1-GATE S	ORTS	62	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
DETECTA	501115	• • • • • • • • • • • • • • • • • • • •	v = 40		• •				
1	2	3.2%	-14000	O	-241	4000	5	4.0%	4
2	4	6.5%	-12000	0	-206	8000	65	52.4%	8
3	g	12.9%	-10000	0	-172	12000	21	16.9%	12
4	8	12.9%	-8000	1	-137	16000	9	7.3%	16
5	12	19.4%	-6000		-103	20000	4	3.2%	20
6	10	16.1%	-4000	2	-69	24000	2	1.6%	24
7	14	22.6%	-2000	10	-34	28000	4	3.2%	28
8	4	6.5%	0	48	0	32000	1	0.8%	32
TOTAL	62		2000	147	34	36000	0	0.0%	36
			4000	268	69	40000	2	1.6%	40
2-GATE S	ORTS	62	6000	283	103	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	166	137	48000	1	0.8%	48
8			10000	82	172	52000	3	2.4%	52
9	2	3.2%	12000	22	206	56000	0	0.0%	56
10	3	4.8%	14000	2	241	60000	1	0.8%	60
11	11	17.7%	16000	0	275	64000	1	0.8%	64
12	12	19.4%	18000	0	309	68000	0	0.0%	68
13	15	24.2%	20000	0	344	72000	1	0.8%	72
14	9	14.5%	22000	0	378	76000	0	0.0%	76
15	10	16.1%	24000	0	412	80000	0	0.0%	80
TOTAL	62		26000	0	447	84000	1	0.8%	84
			>28000	0	0	>84000	3	2.4%	>84
			TOTAL	1032		TOTAL	124		
SUMMARY	TOTALS								
	OT PARTIC	LE EVENTS	127		SORTS BY	ONE GATE ONLY	62		
		CLE EVENTS	92		SORTS BY	TWO GATES	62		
	ISTRIBUTE		0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

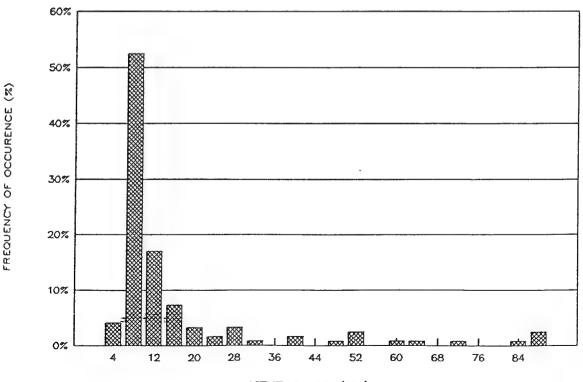
2.00 Empty belt

SORTER 1 LOG DATA FOR 30-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 30-Jun-93



SORTER 2 30-Jun-93							
AVERAGE BACKGROUND COUNT RATE	:	0.80	± 0.0	ol c/sec			
SORTER SOIL DENSITY			tons/m³	,			
GROUND SOIL DENSITY		1.65 t	tons/m³				
and better better the				CONTAMINATED	CLEAN		
MASS TOTAL				0.14 tons	59.7	tons	
MAXIMUM/SORT				4.4 kg	58.3	kg	
MINIMUM/SORT				0.7 kg	53.9	kg	
WEIGHT RECOVERY OR VOLUME REC	OVERY						99.8%
EQUIVALENT SOIL-IN-GROUND				0.11 yd³	47.3	yd3	47.5 yd³/day
PARTICLE ACTIVITY (MAXIMUM ES	TIMATE)						
TOTAL				1,723 kBq			
MAXIMUM/SORT				98 kBq			
MINIMUM/SORT				3.3 kBq			
DISPERSED + PARTICLE (REALIST	IC ESTIMATE) ACTIV	'ITY		656 kBq	5,832	k8q	
MAXIMUM/SORT				46 kBq	15	kBq	
MINIMUM/SORT				0 Bq	-4	k8q	
SPECIFIC ACTIVITY				4,555 Bq/kg	98	Bq/kg	
WORK HISTORY							
WORK DAY START	05:00 AM			WORK DAY END	04:30 PM		
PLANT START-UP	05:00 AM			PLANT SHUT-DOWN	11:30 AM		
START SOIL PROCESSING	05:21 AM			END SOIL PROCESSING			
LUNCH START	11:30 AM			LUNCH PERIOD	0.5	hr	
WORK HOURS				11.0 hr			
AVAILABLE HOU	RS			6.5 hr			
ACTUAL PROCES	S HOURS (total 20-	sec rec	cords)	5.71 hr			
DOWN-TIME				0.79 hr			
TOTAL SYSTEM I	PAUSE			0.00 hr			
NONAVAILABLE 1	HOURS			4.5 hr			
START-UP				0.36 hr			
SHUT-DOWN				0.44 hr			
PLANT PERFORM	ANCE			87.8%			
PRODUCTIVITY				51.9%			
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SEC)		1,164			
NONPROCESS RECORDS (Test, cal	ibration, etc)			5			
20-SEC PROCESS RECORDS				1,027	•		
TOTAL SORT				0 MD>0 & MND=0			
NO SORT				912 AD=0 & MD=0		Dmay	
SOME SORT				115 AD>0&0 <md<mi< td=""><td>MM>UMMAXSMUN</td><td>UIIIdX</td><td></td></md<mi<>	MM>UMMAXSMUN	UIIIdX	
UNEXPLAINED RI				0	INIEVOI ATSI	n	PAUSE
0 <ad<1kbq &="" mi<="" td=""><td>_</td><td></td><td></td><td></td><td>UNEXPLAIN TIME</td><td>r</td><td>TIME</td></ad<1kbq>	_				UNEXPLAIN TIME	r	TIME
	=0 & MD 0						
	<0 & MD D				10:01:54		lone

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1

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137 (ACT_P >0 kBq)

10,270

							-	_			
			2-SEC RECORD	S WITH P	OSITIVES	IN >1 D	ETECTOR				
			2	DETECTO	RS	29	93.5	ζ.			
			3	DETECTO	RS	2	6.5	K			
			4	DETECTO	RS	0	0.0	ζ			
			5	DETECTO	RS	0	0.0	ζ.			
			6	DETECTO	RS	0	0.0	4			
			7	DETECTO	RS	0	0.0	۲			
			8	DETECTO	RS	0	0.0	4			
	TOTAL						31				
			NET 2-SEC RE	CORDS WI	TH SORTS		106				
			2-SEC PERIOD	S WITH N	O SORTS		10,164				
			AVG TIME BET	WEEN 2-S	EC SORTS		193.8 sec				
1-GA	TE SO	RTS	74	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETE	CTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
	1	4	5.4%	-14000	0	-240		4000	5	3.6%	4
	2	12	16.2%	-12000	0	-206		8000	67	48.9%	8
	3	13	17.6%	-10000	. 0	-172		12000	27	19.7%	12
	4	11	14.9%	-8000	- 1	-137		16000	12	8.8%	16
	5	15	20.3%	-6000	2	-103		20000	5	3.6%	20
	6	9	12.2%	-4000	1	-69		24000	7	5.1%	24
	7	9	12.2%	-2000	4	-34		28000	2	1.5%	28
	8	1	1.4%	0	20	0		32000	2	1.5%	32
TOTA	\L	74		2000	85	34		36000	1	0.7%	36
				4000	181	69		40000	1	0.7%	40
2-GA1	E SOF	RTS	63	6000	296	103		44000	3	2.2%	44
DETEC	TR	SORTS	FREQ%	8000	226	137		48000	0	0.0%	48
	8			10000	145	172		52000	0	0.0%	52
	9	5	7.9%	12000	54	206		56000	0	0.0%	56
1	0	9	14.3%	14000	13	240		60000	2	1.5%	60
1	1	13	20.6%	16000	4	274		64000	2	1.5%	64
1	2	11	17.5%	18000	0	309		68000	0	0.0%	68
1	3	13	20.6%	20000	0	343		72000	0	0.0%	72
1	4	8	12.7%	22000	0	377		76000	o	0.0%	76

REC CODE EXPLANATION

15

SUMMARY TOTALS

TOTAL

4

63

1.00 Source check (Soil on belt)

6.3% 24000

26000

>28000

TOTAL

131

66

0

0

0

0

1032

412

446

0

SORTS BY ONE GATE ONLY

SORTS BY TWO GATES

2.00 Empty belt

HOT PARTICLE EVENTS
MULTIPARTICLE EVENTS

DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

3.00 Test (No process soil)

80000

84000

>84000

TOTAL

0.0%

0.0%

0.7%

1

137

74

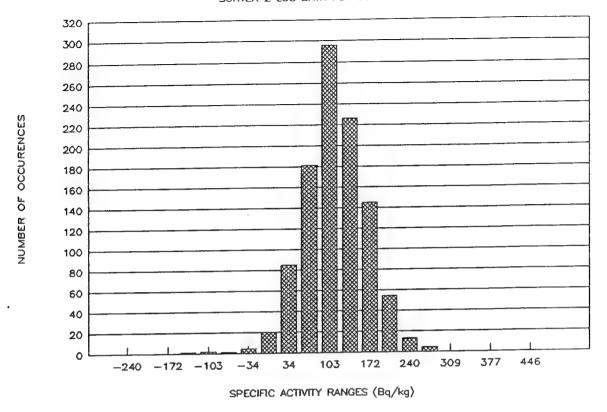
63

80

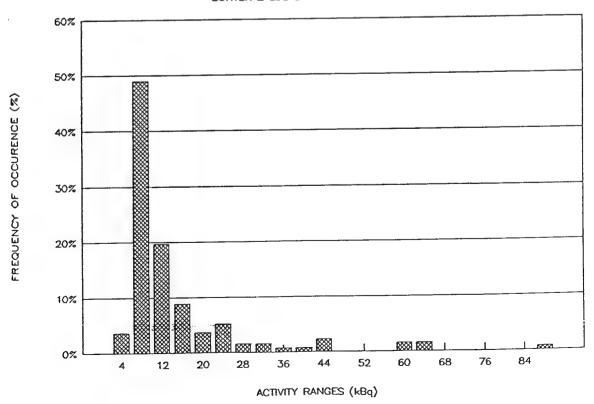
84

>84

SORTER 2 LOG DATA FOR 30-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES
SORTER 2 LOG DATA FOR 30-Jun-93



SORTER 1 02-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.73 ± 0.	.05 c/sec		
SORTER SOIL DENSITY	1.25 tons/m ³			
GROUND SOIL DENSITY	1.65 tons/m ³			
drooms sole sensiti		CONTAMINATED	CLEAN	
MASS TOTAL		0.92 tons	68.4 tons	,
MAXIMUM/SORT		58.2 kg	58.2 kg	
MINIMUM/SORT		0.7 kg	50.2 kg	
THE BECOVERY OF MOUNTE DECOVERY				98.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.73 yd³	54.2 yd3	54.9 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.73 /4	7	
PARTICLE ACTIVITY (MAXIMUM ESTIMATI	FY			
TOTAL		18,518 kBq		
MAXIMUM/SORT		1,763 k8q		
MINIMUM/SORT		2.9 kBq		
HIMIHORY SOK!		· - 		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	6,387 kBq	8,790 kBq	
MAXIMUM/SORT		1202 kBq	21 kBq	
MINIMUM/SORT		0 Bq	-3 kBq	
SPECIFIC ACTIVITY		6,963 Bq/kg	129 Bq/k	g
SPECIFIC ACTIVITY				
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	09:00 AM	PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSING	09:27 AM	END SOIL PROCESSING	04:03 PM	
LUNCH START	11:30 AM	LUNCH PERIOO	0.0 hr	
		10.5 hr		
WORK HOURS		7.5 hc		
AVAILABLE HOURS		6.61 hr		
	RS (total 20-sec records)	0.89 hr		
DOWN-TIME		0.00 hr		
TOTAL SYSTEM PAUSE		3.0 hr		
NONAVAILABLE HOURS		0.45 hr		
START-UP		0.44 hr		
SHUT-DOWN		88.1%		
PLANT PERFORMANCE		63.0%		
PRODUCTIVITY		64.444		
TOTAL SOIL PROCESSING RECORDS (2-SI	EC and 20-SEC)	2,011		
NONPROCESS RECORDS (Test, calibrat		1		
20-SEC PROCESS RECORDS		1,190		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		729 AD=0 & MD=0 8	MND>0	
SOME SORT		460 AD>0&0 <md<mn0< td=""><td>max&MND<mndmax< td=""><td></td></mndmax<></td></md<mn0<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS	S	O		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & 0	MD 0		TIME	TIME
AD<0 & I	MD 0		None	None
ACT_P <5 kBq	173 21.1%			

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2-SEC COUNT PERIODS	11,9	00
2-SEC RECORDS WITH SORTS	8	21 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECT	OR
2 DETECTORS	171	79.9%
3 DETECTORS	40	18.7%
4 DETECTORS	3	1.4%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	2	14
NET 2-SEC RECORDS WITH SORTS	6	07
2-SEC PERIODS WITH NO SORTS	11,2	73
AVG TIME BETWEEN 2-SEC SORTS	39	.2 sec

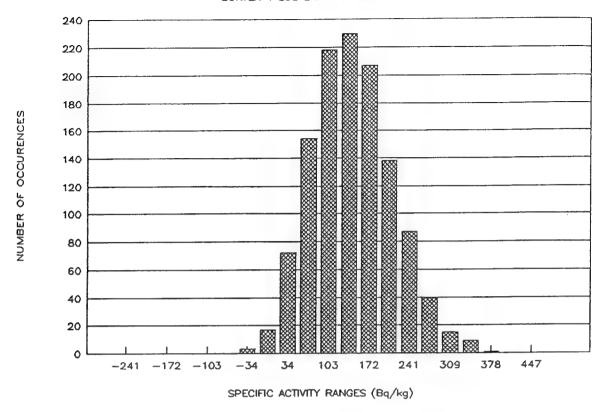
1-GATE	SORTS	426	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(p8)	(#)		(kBq)
									,
1	3	0.7%	-14000	0	-241	4000	49	6.0%	4
2	23	5.4%	-12000	0	-206	8000		46.0%	8
3	44	10.3%	-10000	0	-172	12000	140	17.1%	12
4	84	19.7%	-8000	0	-137	16000	71	8.6%	16
5	97	22.8%	-6000	0	-103	20000	29	3.5%	20
6	77	18.1%	-4000	0	-69	24000	23	2.8%	24
7	83	19.5%	-2000	3	-34	28000	14	1.7%	28
8	15	3.5%	0	17	0	32000	13	1.6%	32
TOTAL	426		2000	72	34	36000	15	1.8%	36
			4000	154	69	40000	9	1.1%	40
2-GATE	SORTS	395	6000	218	103	44000	5	0.6%	44
DETECTR	SORTS	FREQ%	8000	230	137	48000	10	1.2%	48
8			10000	207	172	52000	12	1.5%	52
9	10	2.5%	12000	138	206	56000	1	0.1%	56
10	3 6	9.1%	14000	87	241	60000	2	0.2%	60
11	65	16.5%	16000	40	275	64000	10	1.2%	64
12	83	21.0%	18000	15	309	68000	3	0.4%	68
13	97	24.6%	20000	9	344	72000	4	0.5%	72
14	63	15.9%	22000	1	378	76000	0	0.0%	76
15	41	10.4%	24000	0	412	80000	1	0.1%	80
TOTAL	395		26000	0	447	84000	0	0.0%	84
			>28000	0	0	>84000	32	3.9%	>84
			TOTAL	1191		TOTAL	821		
SUMMARY	TOTALS								
		LE EVENTS	798		SORTS BY	ONE GATE ONLY	426		
		CLE EVENTS	379		SORTS BY	TWO GATES	395		
-	ISTRIBUTE		80						

REC CODE EXPLANATION

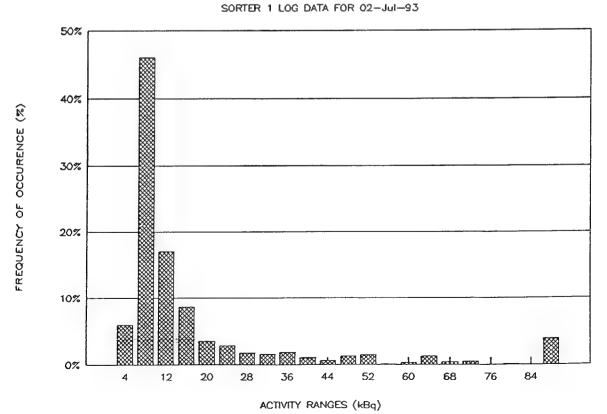
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 02-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 02-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ±	0.01 c/sec		
SORTER SOIL DENSITY	1.25 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m ³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.96 tons	67.9 ton	s
MAXIMUM/SORT		7.3 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	51 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Υ		57.0 17	98.6%
EQUIVALENT SOIL-IN-GROUND		0.76 yd ³	53.8 yd³	54.6 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		15,668 kBq		
MAXIMUM/SORT		647 kBq		
MINIMUM/SORT		2.7 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	5,699 kBq	4,792 kBq	
MAXIMUM/SORT		342 kBq	20 kBq	
MINIMUM/SORT		0 Bq	-10 kBq	
SPECIFIC ACTIVITY		5,926 Bq/kg	71 Bq/I	
C. 200. 00				
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	09:00 AM	PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSING	09:29 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		10.5 hr		
AVAILABLE HOURS		7.5 hr		
ACTUAL PROCESS HO	URS (total 20-sec records)	6.56 hr		
DOWN-TIME		0.94 hr		
TOTAL SYSTEM PAUS	E	0.01 hr		
NONAVAILABLE HOUR	s	3.0 hr		
START-UP		0.49 hr		
SHUT-DOWN		0.45 hr		
PLANT PERFORMANCE		87.5%		
PRODUCTIVITY		62.5%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,099		
NONPROCESS RECORDS (Test, calibra		7		
20-SEC PROCESS RECORDS		1,181		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		689 AD=0 & MD=0 8	MND>0	
SOME SORT		492 AD>0&0 <md<mn0< td=""><td>max&MND<mndmax< td=""><td>(</td></mndmax<></td></md<mn0<>	max&MND <mndmax< td=""><td>(</td></mndmax<>	(
UNEXPLAINED RECOR	DS .	G C		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0 &	MD 0		TIME	TIME
AD<0 &	MD 0		12:19:52	13:10
ACT_P <5 kBq	137 14.9%		15:44:52	

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11,810

2	-2EC CC	ONI PERIODS				11,010				
		2-SEC RECORD	S WITH S	ORTS		918	(ACT_P >0	kBq)		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 D	ETECTOR				
		Ž	2 DETECTO	RS	198		83.5%			
		3	DETECTO	RS	36		15.2%			
		4	DETECTO	RS	3		1.3%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			237				
		NET 2-SEC RE	CORDS WI	TH SORTS		681				
		2-SEC PERIOD	S WITH N	O SORTS		11,129				
		AVG TIME BET	WEEN 2-S	EC SORTS		34.7	sec			
1-GATE S		474	ACT_ND		SPEC_A		ACT_F		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(B q)	(#)		(kBq)
1	19	4.0%	-14000	0	-240		4000) 44	4.8%	4
2	54		-12000	0	-206		8000			8
. 2	97		-10000	1	-172		12000			12
4	108	22.8%	-8000	1	-137		16000			16
5	94	19.8%	-6000	9	-103		20000			20
6	62	13.1%	-4000	27	-69		24000			24
7	33	7.0%	-2000	65	-34		28000			28
8	7		0	131	0		32000		1.2%	32
TOTAL	474		2000	194	34		36000			36
			4000	204	69		40000		1.5%	40
2-GATE SO	ORTS	444	6000	204	103		44000			44
DETECTR	SORTS	FREQ%	8000	117	137		48000	11	1.2%	48
8			10000	96	172		52000	10	1.1%	52
9	34	7.7%	12000	62	206		56000	2	0.2%	56
10	62	14.0%	14000	35	240		60000	5	0.5%	60
11	108	24.3%	16000	28	274		64000	2	0.2%	64
12	99	22.3%	18000	6	309		68000	4	0.4%	68
13	81	18.2%	20000	8	343		72000	5	0.5%	72
14	43	9.7%	22000	0	377		76000	1	0.1%	76
15	17	3.8%	24000	0	412		80000	5	0.5%	80
TOTAL	444		26000	0	446		84000	4	0.4%	84

SUMMARY TOTALS

HOT PARTICLE EVENTS 902 SORTS BY ONE GATE ONLY 474
MULTIPARTICLE EVENTS 416 SORTS BY TWO GATES 444
DISTRIBUTED EVENTS 0

0

1188

0

>84000

TOTAL

27

918

2.9%

>84

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

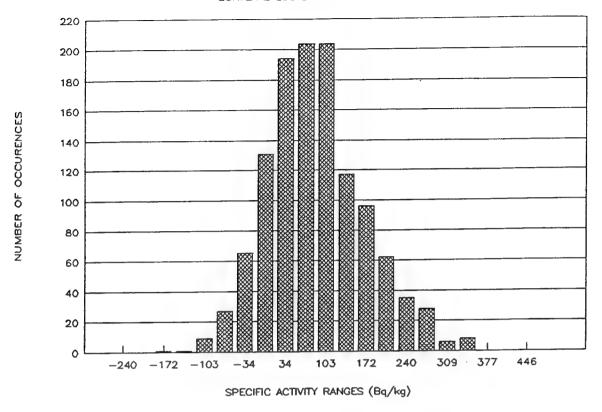
>28000

TOTAL

2.00 Empty belt

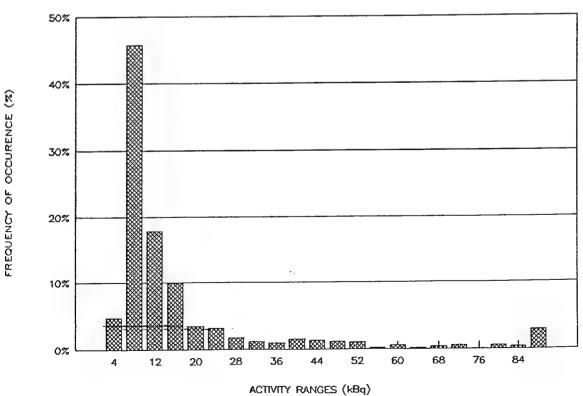
2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 02-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 02-Jul-93



SORTER 1 03-	Jul-93									
AVERAGE BACKGROUND CO	DUNT RATE		0.74	ŧ	0.04	c/sec				
SORTER SOIL DENSITY				tons/m						
GROUND SOIL DENSITY			1.65	tons/m	13					
					(INATED	CLEAN		
MASS TOTAL							tons		tons	
MAXIMUM/SORT						4.4	•	58.2		
MINIMUM/SORT						0.7	kg	53.9	kg	
WEIGHT RECOVERY OR VO	DLUME RECOVERY									99.6%
EQUIVALENT SOIL-IN-G	ROUND					0.19	Aq ₂	52.2	Aq ₂	52.4 yd³/da
PARTICLE ACTIVITY (M/	AXIMUM ESTIMATE)									
TOTAL						6,592	kBq			
MAXIMUM/SORT						717	kBq			
MINIMUM/SORT						3.1	kBq			
DISPERSED + PARTICLE	(REALISTIC ESTIN	ACTI	VITY			2,152	kBq	4,499	kBq	
MAXIMUM/SORT	4					-	kBq	-	kBq	
MINIMUM/SORT						0	Bq	-6	kBq	
SPECIFIC ACTIV	/ITY				•	9,096	Bq/kg	68	Bq/kg	
KORK HISTORY										
WORK DAY START	í C	5:00 AM			u	IORK DA	LY END	04:30 PM		
PLANT START-UP	_	5:00 AH			P	LANT S	SHUT-DOWN	12:00 PM		
START SOIL PRO	_	5:23 AH			Ε	ND SO	L PROCESSING	11:42 AM		
LUNCH START		1:30 AH			ι	UNCH F	PER100	0.5	hr	
MORK	HOURS						11.0 hr			
	ABLE HOURS						6.5 hr			
	AL PROCESS HOURS	(total 20-	-sec re	cords)			6.31 hr			
DOWN-							0.19 hr			
	SYSTEM PAUSE						0.00 hr			
NONAV	AILABLE HOURS						4.5 hr			
START	-UP						0.40 hr			
SHUT-	DOWN						0.30 hr			
	PERFORMANCE						97.1%			
PRODU	CTIVITY						57.4%			
OTAL SOIL PROCESSING	RECORDS (2-SEC	and 20-SEC	:)				1,367			
IONPROCESS RECORDS (T							7			
20-SEC PROCESS						1,136				
TOTAL	SORT					0	0=0MM & 0<0M			
NO SO	RT					970	8 O=QM & O=QA	MND>0		
SOME	SORT					166	DMM> DM> 0.80 < DA	M> GMM&xem	(Dmax	
UNEXP	LAINED RECORDS					0				
0 <ad<< td=""><td>1kBq & MD>0</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>UNEXPLAIR</td><td>l t</td><td>PAUSE</td></ad<<>	1kBq & MD>0	1						UNEXPLAIR	l t	PAUSE
	CM & 0=CA	O						TIME		TIME
	AD<0 & MD	0						07:59:32	1	lone
	<5 k8q	50	21.6%							

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2-SEC COUNT PERIODS	11,	360
2-SEC RECORDS WITH SORTS		231 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	TOR
2 DETECTORS	57	79.2%
3 DETECTORS	12	16.7%
4 DETECTORS	3	4.2%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL		72
NET 2-SEC RECORDS WITH SORTS		159
2-SEC PERIODS WITH NO SORTS	11,	201
AVG TIME BETWEEN 2-SEC SORTS	14	2.9 sec

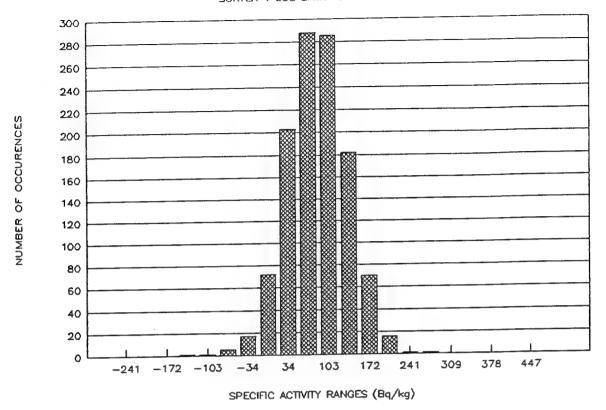
1-GATE	SORTS	116	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P
DETECTR		FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
DE (EU)			•						
1	1	0.9%	-14000	0	-241	4000	15	6.5%	4
2	5	4.3%	-12000	0	-206	8000	95	41.1%	8
3	11	9.5%	-10000	0	-172	12000	36	15.6%	12
4	24	20.7%	-8000	1	-137	16000	17	7.4%	16
5	29	25.0%	-6000	1	-103	20000	9	3.9%	20
6	27	23.3%	-4000	5	-69	24000	9	3.9%	24
7	17	14.7%	-2000	17	-34	28000	5	2.2%	28
8	2	1.7%	0	72	0	32000	5	2.2%	32
TOTAL	116		2000	203	34	36000	3	1.3%	36
			4000	288	69	40000	0		40
2-GATE	SORTS	115	6000	286	103	44000	3		44
DETECTR	SORTS	FREQ%	8000	182	137	48000	2		48
8			10000	70	172	52000	2	0.9%	52
9	2	1.7%	12000	16	206	56000	4	1.7%	56
10	7	6.1%	14000	3	241	60000	5	2.2%	60
11	15	13.0%	16000	1	275	64000	3		64
12	28	24.3%	18000	0	309	68000	2	0.9%	68
13	30	26.1%	20000	0	344	72000	1	0.4%	72
14	25	21.7%	22000	0	378	76000	1	0.4%	76
15	8	7.0%	24000	0	412	80000	0		80
TOTAL	115		26000	0	447	84000	2		84
			>28000	0	0	>84000	12	5.2%	>84
			TOTAL	1143		TOTAL	231		
SUMMARY	TOTALS								
	HOT PARTI	CLE EVENTS	224		SORTS BY	ONE GATE ONLY	116		
	MULT I PART	ICLE EVENTS	100		SORTS BY	TWO GATES	115		
	DISTRIBUT	ED EVENTS	0						

REC CODE EXPLANATION

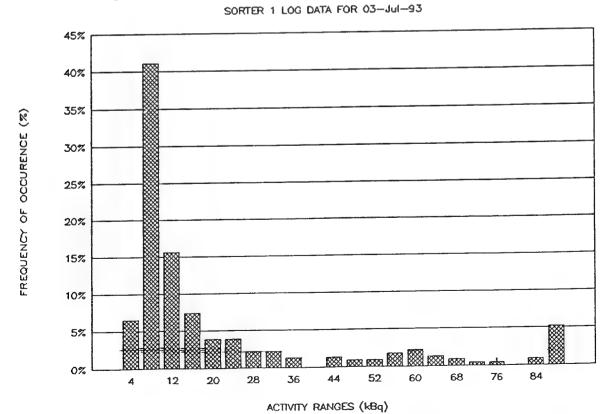
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 03-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 03-Jul-93									
AVERAGE BACKGROUND COUNT RATE		0.80		0.01	c/sec				
SORTER SOIL DENSITY			tons/m		0,000				
GROUND SOIL DENSITY			tons/						
drooms sore sensi					CONTAM	INATED	CLEAN		
MASS TOTAL					0.24	tons	65.8 to	ons	
MAXIMUM/SORT					5.1	kg	58.3 kg	3	
MINIMUM/SORT					0.7	kg	53.2 kg	3	
									20. 48
WEIGHT RECOVERY OR VOLUME RECOVERY					0.40		53.3		99.6% 52.4 yd³/day
EQUIVALENT SOIL-IN-GROUND					0.19	ya	52.2 yo	ır .	72.4 yu 7uay
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)								
TOTAL					4,257	kBq			
MAXIMUM/SORT					184	kBq			
MINIMUM/SORT					2.9	kBq			
	T.M.T. AAT				4 /64	koa	/4943L0	la.	
DISPERSED + PARTICLE (REALISTIC ES	IIMAIE) ACIIV	111			1,451	kBq kBq	(686)kB 12 kB	•	
MAXIMUM/SORT						R6q 8q	-10 kB	•	
MINIMUM/SORT						Bq/kg	(10)Bo		
SPECIFIC ACTIVITY					0,170	ed va	(10)50	h va	
WORK HISTORY									
WORK DAY START	05:00 AM				WORK D	AY END	04:30 PM		
PLANT START-UP	05:00 AM				PLANT :	SHUT-DOWN	12:00 PM		
START SOIL PROCESSING	05:23 AM				END SO	IL PROCESSING			
LUNCH START	11:30 AM				LUNCH I	PERIOD	0.5 hr		
WORK HOURS						11.0 hr			
AVAILABLE HOURS						6.5 hr			
ACTUAL PROCESS HOU	RS (total 20-s	sec re	cords)			6.29 hr			
DOWN-TIME						0.21 hr			
TOTAL SYSTEM PAUSE						0.00 hr			
NONAVAILABLE HOURS						4.5 hr			
START-UP						0.39 hr			
SHUT-DOWN						0.32 hr			
PLANT PERFORMANCE						96.8%			
PRODUCTIVITY						57.2%			
TOTAL SOIL PROCESSING RECORDS (2-SI	EC and 20-SEC))				1,369			
NONPROCESS RECORDS (Test, calibrat		,				10			
20-SEC PROCESS RECORDS					1,133				
TOTAL SORT					-	MD>0 & MND=0			
NO SORT					970	AD=0 & MD=0 8	MND>0		
SOME SORT					163	AD>0&0 <md< td=""><td>max&MND<mndm< td=""><td>ax</td><td></td></mndm<></td></md<>	max&MND <mndm< td=""><td>ax</td><td></td></mndm<>	ax	
UNEXPLAINED RECORDS	5				0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	0						UNEXPLAIN	PAU	SE
AD=0 & 0=DA	4O 0						TIME	TI	ME
AD<0 & I	4D 0						None	Non	е
ACT_P <5 kBq	32	13.6%							

File S2JA0703.WR1

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COUNT PERIODS	11,3	30
2-SEC RECORDS WITH SORTS	2	36 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITI	VES IN >1 DETECT	OR
2 DETECTORS	68	87.2%
3 DETECTORS	9	11.5%
4 DETECTORS	1	1.3%
5 DETECTORS	O	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	•	78
NET 2-SEC RECORDS WITH SO	RTS 1	58
2-SEC PERIODS WITH NO SOR	TS 11,1	72
AVG TIME BETWEEN 2-SEC SO	RTS 143	.4 sec

1-GATE S	ORTS	127	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
3	1	0.8%	-14000	2	-240	4000	12	5.1%	4
2	13	10.2%	-12000	0	-206	8000	78	33.1%	8
3	21	16.5%	-10000	1	-172	12000	41	17.4%	12
4	31	24.4%	-8000	4	-137	16000	25	10.6%	16
5	30	23.6%	-6000	26	-103	20000	15	6.4%	20
6	21	16.5%	-4000	122	-69	24000	16	6.8%	24
7	8	6.3%	-2000	232	-34	28000	9	3.8%	28
8	2	1.6%	0	289	0	32000	4	1.7%	32
TOTAL	127		2000	247	34	36000	7	3.0%	36
			4000	141	69	40000	4	1.7%	40
2-GATE SO	ORTS	109	6000	60	103	44000	6	2.5%	44
DETECTR	SORTS	FREQ%	8000	14	137	48000	1	0.4%	48
8			10000	4	172	52000	2	0.8%	52
9	4	3.7%	12000	1	206	56000	0	0.0%	56
10	12	11.0%	14000	0	240	60000	4	1.7%	60
11	21	19.3%	16000	0	274	64000	1	0.4%	64
12	29	26.6%	18000	0	309	68000	3	1.3%	68
13	24	22.0%	20000	0	343	72000	4	1.7%	72
14	16	14.7%	22000	0	377	76000	1	0.4%	76
15	3	2.8%	24000	0	412	80000	1	0.4%	80
TOTAL	109		26000	0	446	84000	0	0.0%	84
			>28000	0	0	>84000	2	0.8%	>84
			TOTAL	1143		TOTAL	236		
SUMMARY T	OTALS								
нс	T PARTIC	LE EVENTS	215		SORTS BY	ONE GATE ONLY	127		
ML	LTIPARTI	CLE EVENTS	108		SORTS BY	TWO GATES	109		
DI	STRIBUTE	DEVENTS	0						

REC CODE EXPLANATION

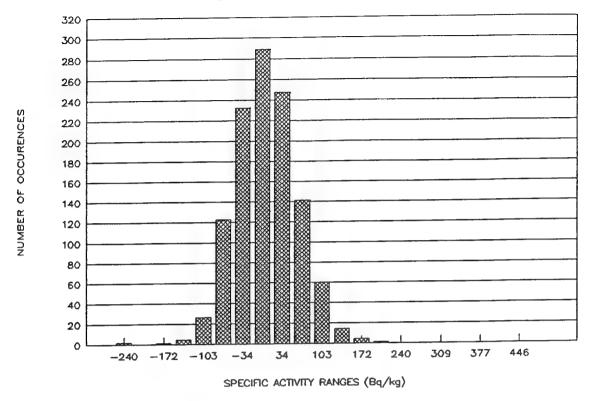
2-SEC

1.00 Source check (Soil on belt)

2.00 Empty belt

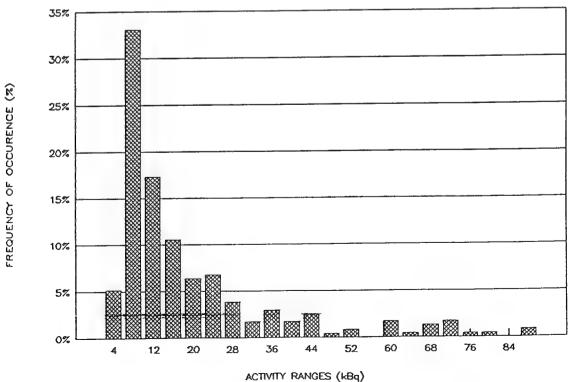
3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 03-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 03-Jul-93



SORTER 4 05-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.71 ± 0	0.04 c/sec		
SORTER SOIL DENSITY	1.4 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.21 tons	116.0 tor	ns
MAXIMUM/SORT		4.1 kg	65.2 kg	
MINIMUM/SORT		0.8 kg	61.2 kg	
WEIGHT RECOVERY OR VOLUME RECO	OVERY			99.8%
EQUIVALENT SOIL-IN-GROUND		0.17 yd ³	92.0 yd³	92.2 yd3/day
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)			
TOTAL		3,276 kBq		
MAXIMUM/SORT		89 kBq		
MINIMUM/SORT		3.7 kBq		
		4 770 40	0.004 km	
DISPERSED + PARTICLE (REALISTI	C ESTIMATE) ACTIVITY	1,378 kBq	9,906 kBq	
MAXIMUM/SORT		56 k8q	24 kBq -7 kBq	
MINIMUM/SORT		0 Bq		•
SPECIFIC ACTIVITY		6,540 Bq/kg	85 Bq/	kg
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSING	05:59 AM	END SOIL PROCESSING	03:58 PM	
LUNCH START	11:30 AM	LUNCH PERIOO	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOUR	S	11.5 hr		
ACTUAL PROCESS	HOURS (total 20-sec records)	9.91 hr		
DOWN-TIME		1.59 hr		
TOTAL SYSTEM P		0.06 hr		
NONAVAILABLE H	OURS	0.0 hr		
START-UP		0.99 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMA	NCE	86.1%		
PRODUCTIVITY		86.1%		
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SEC)	1,933		`
NONPROCESS RECORDS (Test, cali		8		
20-SEC PROCESS RECORDS		1,783		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,602 AD=0 & MD=0 8	R MND>0	
SOME SORT		181 AD>0&0 <md<mni< td=""><td></td><td><</td></md<mni<>		<
UNEXPLAINED RE	CORDS	0		
0 <ad<1kbq &="" md<="" td=""><th></th><td></td><td>UNEXPLAIN</td><td>PAUSE</td></ad<1kbq>			UNEXPLAIN	PAUSE
•	0 0430		TIME	TIME
, AD<	0 OM 3 O		None	14:50
ACT_P <5 kBq	13 8.7%			

68

2	-SEC CO	UNT PERIODS				17,830					
_		2-SEC RECORD	S WITH S	ORTS		150	(ACT_P	>0 kBq)			
		2-SEC RECORD			IN >1 DE	TECTOR					
			DETECTO		38		84.4%				
		3	DETECTO	RS	7		15.6%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			45					
		NET 2-SEC RE	CORDS WI	TH SORTS		105					
		2-SEC PERIOD	S WITH N	O SORTS		17,725					
		AVG TIME BET	WEEN 2-S	EC SORTS		339.6	sec				
1-GATE SO	ORTS	94	ACT_ND	NUMBER	_			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
	37	39.4%	-14000	0	-215			4000	4	2.7%	4
2	17		-12000	0	-184			8000	57		8
3	15	16.0%	-10000	1	-153			12000	27	18.0%	12
4	10	10.6%	-8000	2	-123			16000	14	9.3%	16
5	5	5.3%	-6000	3	-92			20000	5	3.3%	20
6	3		-4000	8	-61			24000	3	2.0%	24
7	5	5.3%	-2000	20	-31			28000	2	1.3%	28
8	2		0	63	0			32000	1	0.7%	32
TOTAL	94		2000	185	31			36000	4	2.7%	36
			4000	307	61			40000	Z	1.3%	40
2-GATE SO	ORTS	56	6000	409	92			44000	2	1.3%	44
DETECTR	SORTS	FREQ%	8000	372	123			48000	2	1.3%	48
8			10000	233	153			52000	3	2.0%	52
9	10	17.9%	12000	126	184			56000	2	1.3%	56
10	14	25.0%	14000	42	215			60000	2	1.3%	60
11	14	25.0%	16000	14	245			64000	4	2.7%	64
12	4	7.1%	18000	5	276			68000	3	2.0%	68
13	5	8.9%	20000	2	307			72000	6	4.0%	72
14	5	8.9%	22000	0	337			76000	1	0.7%	76
15	4	7.1%	24000	1	368			00008	2	1.3%	80

SUMMARY TOTALS

TOTAL

HOT PARTICLE EVENTS 141 SORTS BY ONE GATE ONLY 94
MULTIPARTICLE EVENTS 121 SORTS BY TWO GATES 56
DISTRIBUTED EVENTS 0

0

1791

399

REC CODE EXPLANATION

56

1.00 Source check (Soil on belt)

26000

>28000

TOTAL

2.00 Empty belt

3.00 Test (No process soil)

File S4JA0705.WR1

2

2

2

150

84000

>84000

TOTAL

1.3%

1.3%

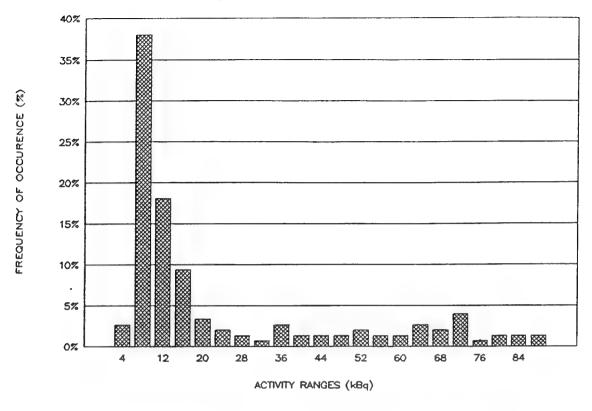
84

>84

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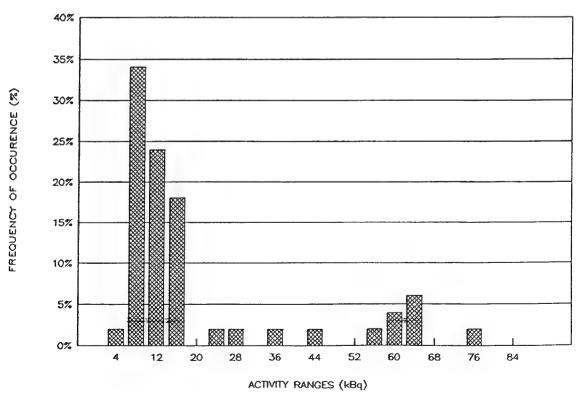
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 4 LOG DATA FOR 05-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 4 LOG DATA FOR 06-Jul-93



SORTER 1 06	- Jul -93									
AVERAGE BACKGROUND	COUNT RATE	(86.0	±	0.04	c/sec				
SORTER SOIL DENSITY		1	1.25	tons/m	3					
GROUND SOIL DENSITY		1	1.65	tons/m	3					
							INATED	CLEAN		
MASS TOTAL							tons		tons	
MAXIMUM/SORT						61.1	•	58.2		
MINIMUM/SORT						0.7	kg	54.6	Kg	
WEIGHT RECOVERY OR	VOLUME RECOVERY									99.5%
EQUIVALENT SOIL-IN-						0.11	Aq ₃	24.1	yd3	24.2 yd3/da
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)									
TOTAL						375	kBq			
MAXIMUM/SORT							kBq			
MINIMUM/SORT						3.5	kBq			
P. (E (REALISTIC ESTIMATE	EN ACTIVIT	гу			160	kBq	2,337	kBa	
	E (KEWLIZIIC EZITAMIC	c) ACTIVIT	• •				kBq	•	kBq	
MAXIMUM/SORT							8q		kBq	
MINIMUM/SORT SPECIFIC ACT							8q/kg		Bq/kg	1
SPECIFIC ACI										
WORK HISTORY										
WORK DAY STA	RT 05:0	MA 00				WORK D	AY END	04:30 PM		
PLANT START-	UP 12:3	30 PM				PLANT	SHUT-DOWN	04:30 PM		
START SOIL P	ROCESSING 12:4	46 PM				END SO	IL PROCESSING			
LUNCH START	11:3	30 AM				LUNCH	PER100	0.5	hr	
1100	K HOURS						11.0 hr	•		
	ILABLE HOURS						4.0 hr			
	UAL PROCESS HOURS (to	otal 20-se	ec re	cords)			2.91 hr			
	N-TIME						1.09 hr			
=	AL SYSTEM PAUSE						0.25 hr			
	AVAILABLE HOURS						7.0 hr			
	RT-UP						0.27 hr			
SHU	T-DOWN						0.58 hr			
PLA	NT PERFORMANCE						72.8%			
PRO	DUCTIVITY						26.5%			
	NO 0500000 43 050	4 20-000					544			
	NG RECORDS (2-SEC and (Test, calibration, e						6			
20-SEC PROCE		eccy				524				
	AL SORT						MD>0 & MND=0			
	SORT					_	AD=0 & MD=0	L MND>0		
	E SORT						AD>0&0 <md< td=""><td></td><td>NDmax</td><td></td></md<>		NDmax	
	XPLAINED RECORDS					0				
	D<1kBq & MD>0	0						UNEXPLAI	N	PAUSE
	CM & 0=CA	0						TIME		TIME
	AD<0 & MD	0						None		13:24
	P <5 kBq		15.0%	,						

File S1JA0706.WR1

1

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5,240

۷.	-26C CO	ONI PERIODS				3,240				
		2-SEC RECOR	S WITH S	ORTS		20	(ACT_P >0 kBq)			
		2-SEC RECOR	OS WITH F	OSITIVES	IN >1 DE	ETECTOR				
		;	2 DETECTO	RS	6		85.7%			
		3	3 DETECTO	ORS .	1		14.3%			
		4	4 DETECTO	RS	0		0.0%			
			DETECTO	RS	0		0.0%			
			DETECTO	RS	0		0.0%			
		7	7 DETECTO	RS	0		0.0%			
		ŧ	B DETECTO	RS	Ø		0.0%			
		1	TOTAL			7				
		NET 2-SEC RE	CORDS WI	TH SORTS		13				
		2-SEC PERIO	S WITH N	O SORTS		5,227				
		AVG TIME BET	WEEN 2-S	EC SORTS		806.2	sec			
1-GATE S	ORTS	10	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(k8q)
1	1	10.0%	-14000	0	-241		4000	2	10.0%	4
2	1	10.0%	-12000	0	-206		8000		25.0%	8
3	o	0.0%	-10000	0	-172		12000	1		12
4	1	10.0%	-8000	0	-137		16000		15.0%	16
5	4	40.0%	-6000	1	-103		20000	1	5.0%	20
6	2	20.0%	-4000	1	-69		24000	3		24
7	1	10.0%	-2000	5	-34		28000	1	5.0%	28
8	0	0.0%	0	21	0		32000	0		32
TOTAL	10		2000	78	34		36000	1	5.0%	36
			4000	128	69		40000	0	0.0%	40
2-GATE SO	ORTS	10	6000	160	103		44000	1		44
DETECTR	SORTS	FREQ%	8000	77	137		48000	0	0.0%	48
8			10000	46	172		52000	1	5.0%	52
9	1	10.0%	12000	10	206		56000	0	0.0%	56
10	0	0.0%	14000	3	241		60000	1	5.0%	60
11	1	10.0%	16000	0	275		64000	0	0.0%	64
12	3	30.0%	18000	0	309		68000	0	0.0%	68
13	2	20.0%	20000	0	344		72000	0	0.0%	72
14	3	30.0%	22000	0	378		76000	0	0.0%	76
15	0	0.0%	24000	0	412		80000	0	0.0%	80
TOTAL	10		26000	0	447		84000	0	0.0%	84
			>28000	0	0		>84000	0	0.0%	>84
			TOTAL	530			TOTAL	20		
SUMMARY T	OTALS									
но	T PARTI	CLE EVENTS	20		SORTS BY	DNE GA	TE ONLY	10		
MU	LTIPART	ICLE EVENTS	15		SORTS BY	TWO GA	TES	10		
0.7	CTOIDUT	CD CUENTO	4/7							

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

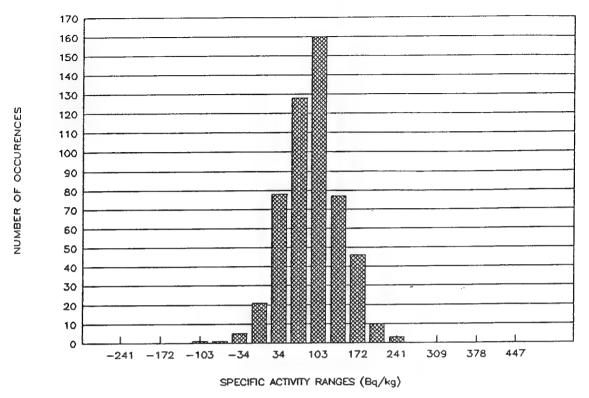
2.00 Empty belt

2-SEC COUNT PERIODS

3.00 Test (No process soil)

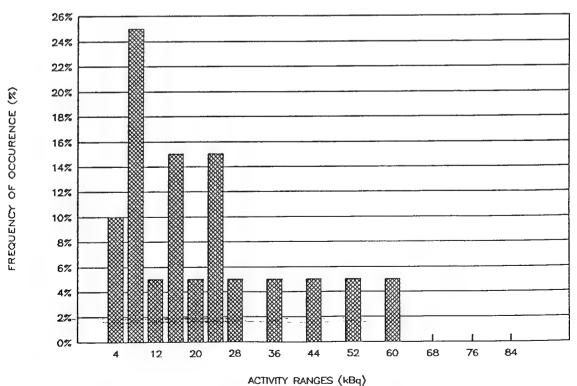
DISTRIBUTED EVENTS 163

SORTER 1 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 06-Jul-93



SORTER 2 06-Jul-93					
SORTER 2 06-Jul-93					
AVERAGE BACKGROUND COUNT RA	ATE	0.75 ± 0	0.05 c/sec		
SORTER SOIL DENSITY		1.25 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.09 tons	30.6 to	ons
MAXIMUM/SORT			61.3 kg	58.3 kg	1
MINIMUM/SORT			0.7 kg	54.6 kg)
WEIGHT RECOVERY OR VOLUME I	RECOVERY				99.7%
EQUIVALENT SOIL-IN-GROUND			0.07 yd3	24.3 yo	13 24.4 yd3/day
PARTICLE ACTIVITY (MAXIMUM	ESTIMATE)		/20 to:		
TOTAL			429 kBq		
MAXIMUM/SORT			65 kBq		
MINIMUM/SORT			3.4 k8q		
DISPERSED + PARTICLE (REAL)	STIC ESTIMATE) AC	TIVITY	157 k8q	1,572 kB	q
MAXIMUM/SORT			36 k8q	11 kB	q
MINIMUM/SORT			0 8q	-8 kB	q
SPECIFIC ACTIVITY			1,708 Bq/kg	51 Bq	/kg
ORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	04:30 PM	
PLANT START-UP	12:30 PM		PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSIN			END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
11001/ 1101/00			11.0 hr		
WORK HOURS	101100		4.0 hr		
AVAILABLE H			2.93 hr		
	ESS HOURS (total 2	u-sec records)	1.07 hr		
DOWN-TIME			0.25 hr		
TOTAL SYSTE			7.0 hr		
NONAVAILABL	E NOURS		0.28 hr		
START-UP			0.55 hr		
SHUT-DOWN	DHANOE		73.2%		
PLANT PERFO			26.6%		
PRODUCTIVIT	ī		20.0%		
OTAL SOIL PROCESSING RECOR	DS (2-SEC and 20-5	EC)	557		
ONPROCESS RECORDS (Test, o	alibration, etc)		3		
20-SEC PROCESS RECOR	DS		527		
TOTAL SORT			1 MD>0 & MND=0		
NO SORT			505 AD=0 & MD=0 &		
SOME SORT			21 AD>0&0 <md<mne< td=""><td>mGNM>GNM&xsm(</td><td>ax</td></md<mne<>	mGNM>GNM&xsm(ax
UNEXPLAINED	RECORDS		0		
0 <ad<1kbq &<="" td=""><td>MD>0</td><td></td><td></td><td>UNEXPLAIN</td><td>PAUSE</td></ad<1kbq>	MD>0			UNEXPLAIN	PAUSE
	0 M & 0=CA			TIME	TIME
	0 & MD & O>QA			None	13:24
ACT P <5 k8	a 3	10.0%			

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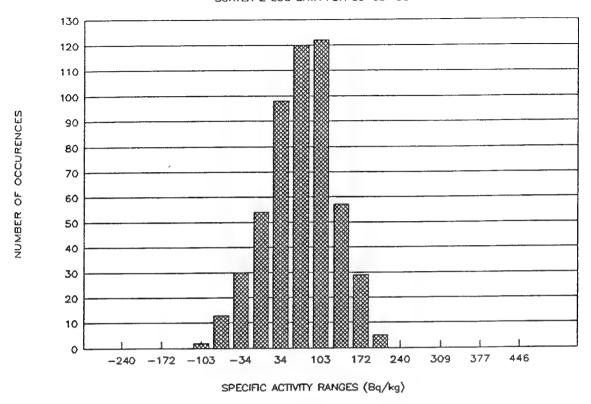
2-SEC COUNT PERIODS	5,270	•
2-SEC RECORDS WITH SORTS	30	(ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	
2 DETECTORS	3	50.0%
3 DETECTORS	2	33.3%
4 DETECTORS	1	16.7%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	6	
NET 2-SEC RECORDS WITH SORTS	24	
2-SEC PERIODS WITH NO SORTS	5,246	
AVG TIME BETWEEN 2-SEC SORTS	439.2	sec

1-GATE S	ORTS	16	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
		,	4/000		2/0		4000	2	6.7%	4
1	0	0.0%	-14000	0	-240		8000	9	30.0%	8
2	3	18.8%	-12000	0	-206			-	33.3%	12
3	4	25.0%	-10000	0	-172		12000	10 2		16
4	5	31.3%	-8000	0	-137		16000	_	6.7%	
5	0	0.0%	-6000	2	-103		20000	3	10.0%	20
6	1	6.3%	-4000	13	-69		24000	0	0.0%	24
7	2	12.5%	-2000	30	-34		28000	2	6.7%	28
8	1	6.3%	0	54	0		32000	0	0.0%	32
TOTAL	16		2000	98	34		36000	0	0.0%	36
			4000	120	69		40000	0	0.0%	40
2-GATE SO	ORTS	14	6000	122	103		44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	57	137		48000	0	0.0%	48
8			10000	29	172		52000	0	0.0%	52
9	1	7.1%	12000	5	206		56000	Ð	0.0%	56
10	3	21.4%	14000	o	240		60000	0	0.0%	60
11	7	50.0%	16000	0	274		64000	0	0.0%	64
12	0	0.0%	18000	0	309		68000	2	6.7%	68
13	1	7.1%	20000	0	343		72000	Θ	0.0%	72
14	1	7.1%	22000	0	377		76000	0	0.0%	76
15	1	7.1%	24000	0	412		80000	0	0.0%	80
TOTAL	14		26000	0	446		84000	0	0.0%	84
			>28000	0	0		>84000	0	0.0%	>84
			TOTAL	530			TOTAL	30		
SUMMARY 1	TOTALS									
HC	T PARTICL	E EVENTS	29		SORTS BY	ONE GATE O	MLY	16		
		LE EVENTS	13		SORTS BY	TWO GATES		14		
DI	STRIBUTED	EVENTS	84							

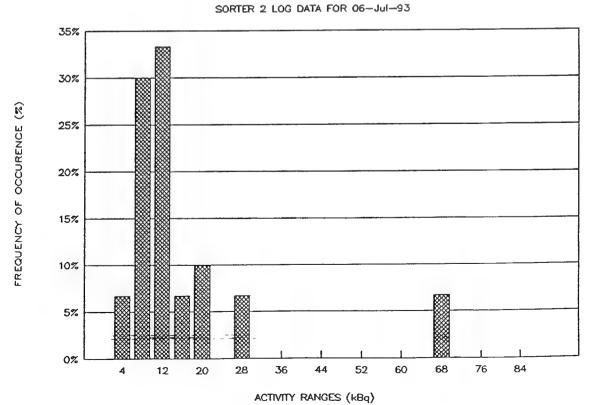
REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 4 06-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.69 ± 0	.03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.25 tons	51.3 ton	s
MAXIMUM/SORT		60.6 kg	60.6 kg	
MINIMUM/SORT		0.8 kg	58.3 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	9 4			99.5%
EQUIVALENT SOIL-IN-GROUND	•	0.20 yd3	40.6 yds	40.8 yd3/day
EROIMEENT DOLL IN GROOM		·		
PARTICLE ACTIVITY (MAXIMUM ESTIMA	ATE)			
TOTAL		899 kBq		
MAXIMUM/SORT		73 kBq		
MINIMUM/SORT		3.9 kBq		
DISPERSED + PARTICLE (REALISTIC E	ESTIMATE) ACTIVITY	587 kBq	4,906 kBq	
MAXIMUM/SORT		58 kBq	20 kBq	
MINIMUM/SORT		D8 0	-3 kBq	
SPECIFIC ACTIVITY		2,354 Bq/kg	96 Bq/	kg
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	11:10 AM	
START SOIL PROCESSING	05:11 AM	END SOIL PROCESSING	10:39 AM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		11.0 hr		
AVAILABLE HOURS		6.2 hr		
	OURS (total 20-sec records)	4.72 hr		
DOWN-TIME		1.44 hr		
TOTAL SYSTEM PAUS	SE	0.68 hr		
NONAVAILABLE HOUR	RS .	4.8 hr		
START-UP		0.20 hr		
SHUT-DOWN		0.51 hr		
PLANT PERFORMANCE	•	76.6%		
PRODUCTIVITY		42.9%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	900		
NONPROCESS RECORDS (Test, calibra	ation, etc)	14		
20-SEC PROCESS RECORDS		850		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		712 AD=0 & MD=0 8		
SOME SORT		136 AD>0&0 <md<mn< td=""><td>Omax&MND<mndma< td=""><td>C</td></mndma<></td></md<mn<>	Omax&MND <mndma< td=""><td>C</td></mndma<>	C
UNEXPLAINED RECOR	RDS	0		241105
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 8			TIME	TIME
AD<0 8			None	05:45
ACT_P <5 kBq	5 10.0%			07:09

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2-SEC COUNT PERIODS	8,50	0
2-SEC RECORDS WITH SORTS	5	$0 \text{ (ACT_P > 0 kBq)}$
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	R
2 DETECTORS	11	91.7%
3 DETECTORS	1	8.3%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	1	2
NET 2-SEC RECORDS WITH SORTS	3	В
2-SEC PERIODS WITH NO SORTS	8,46	2
AVG TIME BETWEEN 2-SEC SORTS	447.	4 sec

1-GATE	SORTS	35	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	17	48.6%	-14000	0	-231	4000	1	2.0%	4
2	3	8.6%	-12000	0	-198	8000	17	34.0%	8
3	5	14.3%	-10000	0	-165	12000	12	24.0%	12
4	2	5.7%	-8000	2	-132	16000	9	18.0%	16
5	2	5.7%	-6000	4	-99	20000	0	0.0%	20
6	3	8.6%	-4000	2	-66	24000	1	2.0%	24
7	2	5.7%	-2000	5	-33	28000	1	2.0%	28
8	1	2.9%	0	37	0	32000	0	0.0%	32
TOTAL	35		2000	78	33	36000	1	2.0%	36
			4000	174	66	40000	0	0.0%	40
2-GATE	ORTS	15	6000	190	99	44000	1	2.0%	44
DETECTR	SORTS	FREQ%	8000	167	132	48000	0	0.0%	48
8			10000	112	165	52000	0	0.0%	52
9	2	13.3%	12000	50	198	56000	1	2.0%	56
10	1	6.7%	14000	22	231	60000	2	4.0%	60
11	5	33.3%	16000	7	264	64000	3	6.0%	64
12	2	13.3%	18000	7	297	68000	0	0.0%	68
13	2	13.3%	20000	5	330	72000	0	0.0%	72
14	2	13.3%	22000	2	363	76000	1	2.0%	76
15	1	6.7%	24000	0	396	80000	0	0.0%	80
TOTAL	15		26000	0	429	84000	0	0.0%	84
			>28000	0	0	>84000	0	0.0%	>84
			TOTAL	864		TOTAL	50		
SUMMARY	TOTALS								
H	OT PARTICE	LE EVENTS	48		SORTS BY	ONE GATE ONLY	35		
	ULTIPARTIC	CLE EVENTS	117		SORTS BY	TWO GATES	15		
٥	ISTRIBUTED	EVENTS	158						

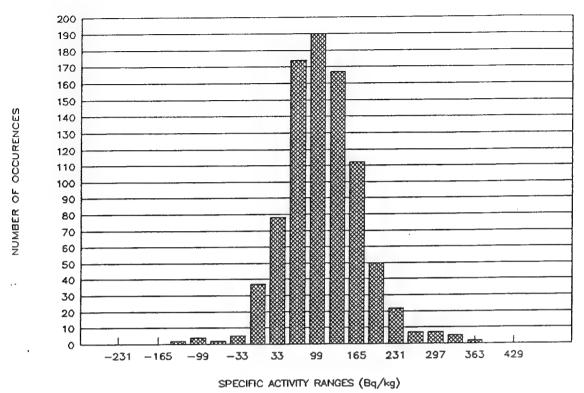
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

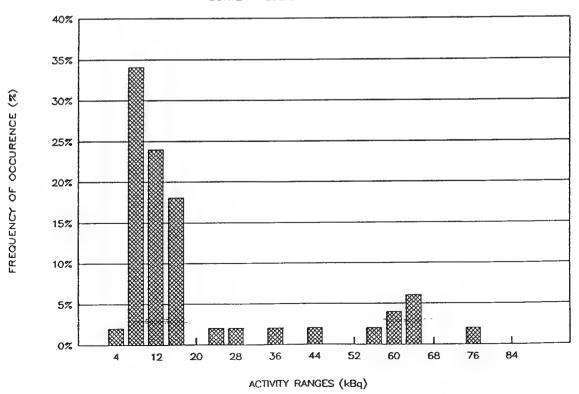
3.00 Test (No process soil)

SORTER 4 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 4 LOG DATA FOR 06-Jul-93



SORTER 1 12-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.77 ± 0	.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m ³			
GROOMD SOLE DEMOTITE	,	CONTAMINATED	CLEAN	
MASS TOTAL		2.62 tons	107.9 tor	าร
MAXIMUM/SORT		58.2 kg	58.2 kg	
MINIMUM/SORT		0.7 kg	50.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Υ			97.6%
EQUIVALENT SOIL-IN-GROUND		2.08 yd³	85.5 yd ¹	87.6 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)	40 450 10		
TOTAL		19,158 kBq		
MAXIMUM/SORT		285 kBq		
MINIMUM/SORT		2.9 kBq		
PIONTOCO - DANTICIT /REALISTIC E	CTIMATE) ACTIVITY	7,607 kBq	10,785 kBd	1
DISPERSED + PARTICLE (REALISTIC E MAXIMUM/SORT	STERNIC / NOTETITE	184 kBq	21 kBc	•
		0 8q	-4 kBd	•
MINIMUM/SORT SPECIFIC ACTIVITY		2,901 Bq/kg	100 Bq/	•
SPECIFIC ACTIVITY		2,77. 04.13		
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSING	05:22 AM	END SOIL PROCESSING	03:55 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	URS (total 20-sec records)	10.54 hr		
DOWN-TIME		0.96 hr		
TOTAL SYSTEM PAUS		0.03 hr		
NONAVAILABLE HOUR	S	0.0 hr		
START-UP		0.37 hr		
SHUT-DOWN		0.57 hr		
PLANT PERFORMANCE		91.7% 91.7%		
PRODUCTIVITY		71.16		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	3,047		
NONPROCESS RECORDS (Test, calibra		10		
20-SEC PROCESS RECORDS		1,898		
TOTAL SORT		26 MD>0 & MND=0		
NO SORT		1,244 AD=0 & MD=0 8	MND>0	
SOME SORT		628 AD>0&0 <md<mn0< td=""><td></td><td>x</td></md<mn0<>		x
UNEXPLAINED RECOR	os	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	5		UNEXPLAIN	PAUSE
& 0=0A			TIME	TIME
& 0>0A			06:02:29	05:38
ACT_P <5 kBq	256 22.3%		09:47:09	
- '				

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	ש-פבר רחו	INT PERIODS				18,980				1	1:57:29
	2 320 000	2-SEC RECORD	S HITH S	ORTS			(ACT P	>0 kBq)		1	3:05:49
		2-SEC RECORD			IN >1 DE		_			1	3:08:09
			DETECTO		258		80.6%				
		_	DETECTO		54		16.9%				
			DETECTO		8		2.5%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
		_	OTAL	K.S	•	320	••••				
		NET 2-SEC RE		TH CODIC		829					
		2-SEC PERIOD				18,151					
		AVG TIME BET				45.8	Sec				
		AAR ITHE REI	MCEN 2-2	EC SUK13		43.0	300				
1-GATE	SORTS	564	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR		FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
			•								
1	11	2.0%	-14000	O	-241			4000	76	6.6%	4
2	38	6.7%	-12000	0	-206			8000	514	44.7%	8
3	80	14.2%	-10000	0	-172			12000	197	17.1%	12
4	101	17.9%	-8000	0	-137			16000	93	8.1%	16
5	150	26.6%	-6000	2	-103			20000	50	4.4%	20
6	94	16.7%	-4000	5	-69			24000	27	2.3%	24
7	77	13.7%	-2000	15	-34			28000	34	3.0%	28
8	13	2.3%	0	90	0			32000	21	1.8%	32
TOTAL	564		2000	169	34			36000	21	1.8%	36
			4000	367	69			40000	11	1.0%	40
2-GATE	SORTS	585	6000	445	103			44000	12	1.0%	44
DETECTR		FREQ%	8000	383	137			48000	9	0.8%	48
8	•••••		10000	217	172			52000	7	0.6%	52
9	24	4.1%	12000	111	206			56000	5	0.4%	56
10	50	8.5%	14000	60	241			60000	6	0.5%	60
11	107	18.3%	16000	22	275			64000	6	0.5%	64
12	143	24.4%	18000	8	309			68000	4	0.3%	68
13	126	21.5%	20000	9	344			72000	4	0.3%	72
14	92	15.7%	22000	5	378			76000	6	0.5%	76
15	43	7.4%	24000	0	412			80000	8	0.7%	80
TOTAL	585		26000	0	447			84000	2	0.2%	84
			>28000	0	0		>	84000	36	3.1%	>84
			TOTAL	1908				TOTAL	1149		
SUMMARY	TOTALS										
	HOT PART	ICLE EVENTS	1162		SORTS BY	DNE G	ATE ONL	Y	564		
	MULTIPART	TICLE EVENTS	483		SORTS BY	TWO G	ATES		585		
	DISTRIBU	TED EVENTS	1954								

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

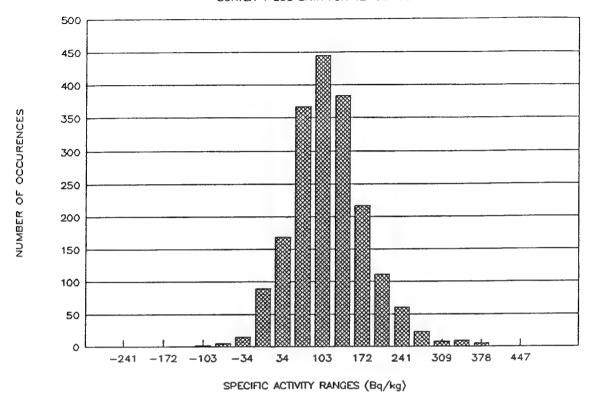
2.00 Empty belt

3.00 Test (No process soil)

File S1JA0712.WR1

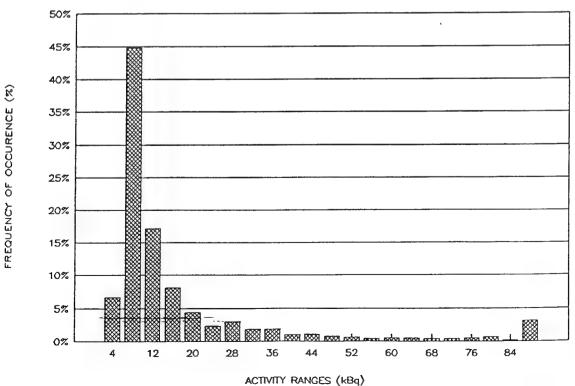
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SORTER 1 LOG DATA FOR 12-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 12-Jul-93



SORTER 2 12-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ±	0.02 c/sec		
SORTER SOIL DENSITY	1.3 tons/m	3		
GROUND SOIL DENSITY	1.65 tons/m	3		
GROOMS SOLE SENSEL		CONTAMINATED	CLEAN	
MASS TOTAL		3.73 tons	107.1 tor	s
MAXIMUM/SORT		58.3 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
WEIGHT RECOVERY OR VOLUME REC	OVERY			96.6%
EQUIVALENT SOIL-IN-GROUND		2.96 yd ³	84.9 yd³	87.9 yd3/day
PARTICLE ACTIVITY (MAXIMUM ES	TIMATE)			
TOTAL		24,289 kBq		
MAXIMUM/SORT		1,592 kBq		
MINIMUM/SORT		2.8 kBq		
			47 770 1.0.	
DISPERSED + PARTICLE (REALIST	IC ESTIMATE) ACTIVITY	9,965 kBq	13,338 kBd	•
MAXIMUM/SORT		897 kBq	21 kBc	
MINIMUM/SORT		0 Bq	-5 kBd	•
SPECIFIC ACTIVITY		2,670 Bq/kg	125 Bq/	Kg
WORK HISTORY	05.00.44	WORK DAY END	04:30 PM	
WORK DAY START	05:00 AM	PLANT SHUT-DOWN		
PLANT START-UP	05:00 AM	END SOIL PROCESSING		
START SOIL PROCESSING	05:20 AM 11:30 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AA	CONON TENTE		
WORK HOURS		11.5 hr		
AVAILABLE HOU	RS	11.5 hr		
ACTUAL PROCES	S HOURS (total 20-sec records)	10.57 hr		
DOWN-TIME		0.93 hr		
TOTAL SYSTEM	PAUSE	0.03 hr		
NONAVAILABLE	HOURS	0.0 hr		
START-UP		0.35 hr		
SHUT-DOWN		0.57 hr		
PLANT PERFORM	ANCE	91.9%		
PRODUCT1VITY		91.9%		
	- 40 AGO 4 30 AGO	3,200		
TOTAL SOIL PROCESSING RECORDS		6		
NONPROCESS RECORDS (Test, cal		1,902		
20-SEC PROCESS RECORDS	•	42 MD>0 & MND=0		
TOTAL SORT		1,153 AD=0 & MD=0 &	& MND>0	
NO SORT		707 AD>0&0 <md<mni< td=""><td></td><td>ax</td></md<mni<>		ax
SOME SORT UNEXPLAINED R	FCORDS	0		
ONEXPLAINED N		•	UNEXPLAIN	PAUSE
•)=0 & MD 0		TIME	TIME
	0 & MD 0		07:59:49	05:38
ACT P <5 kBq	196 15.1%		11:23:29	
WCI_F () KDQ	123 12111			

File S2JA0712.WR1

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	2-SEC CO	UNT PERIODS				19,020					14:52:09
		2-SEC RECORD	S WITH S	ORTS		1,298	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE						
			DETECTO		283		84.2%				
			DETECTO		50		14.9%				
			DETECTO		3		0.9%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL		•	336					
		NET 2-SEC RE		PTGO2 NT		962					
		2-SEC PERIOD				18,058					
		AVG TIME BET				39.5					
		MAG LIME DEL	MEEN 2-3	EC SORTS		37.3	300				
1-GATE	SORTS	680	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECT		FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(k8q)
	23	3.4%	-14000	0	-240			4000	54	4.2%	4
2	104	15.3%	-12000	0	-206			8000	581	44.8%	8
3	127	18.7%	-10000	0	-172			12000	251	19.3%	12
4	137	20.1%	-8000	0	-137			16000	108	8.3%	16
5	128	18.8%	-6000	1	-103			20000	57	4.4%	20
6	91	13.4%	-4000	6	-69			24000	55	4.2%	24
7	63	9.3%	-2000	13	-34			28000	20	1.5%	28
8	7	1.0%	0	79	0		:	32000	33	2.5%	32
TOTAL	680		2000	144	34			36000	20	1.5%	36
			4000	263	69		•	40000	15	1.2%	40
2-GATE	SORTS	618	6000	322	103		•	44000	10	0.8%	44
DETECT	R SORTS	FREQ%	8000	345	137		4	48000	9	0.7%	48
8			10000	283	172		9	52000	8	0.6%	52
9	55	8.9%	12000	197	206		9	56000	10	0.8%	56
10	90	14.6%	14000	115	240		4	60000	6	0.5%	60
11	134	21.7%	16000	79	274			64000	9	0.7%	64
12	129	20.9%	18000	34	309			68000	5	0.4%	68
13	111	18.0%	20000	22	343		•	72000	4	0.3%	72
14	66	10.7%	22000	5	377			76000	4	0.3%	76
15	33	5.3%	24000	0	412			80000	8	0.6%	80
TOTAL	618		26000	0	446			84000	1	0.1%	84
	•		>28000	0	0		>	34000	30	2.3%	>84
			TOTAL	1908				TOTAL	1298		
SUMMARY	Y TOTALS										
	HOT PART	ICLE EVENTS	1261		SORTS BY	ONE GA	ATE ONL	r	680		
	MULTIPAR	TICLE EVENTS	742		SORTS BY	THO GA	ATES		618		
	DISTRIBU	FED EVENTS	3118								

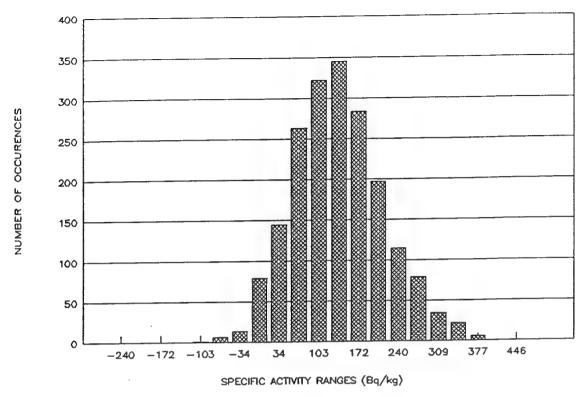
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

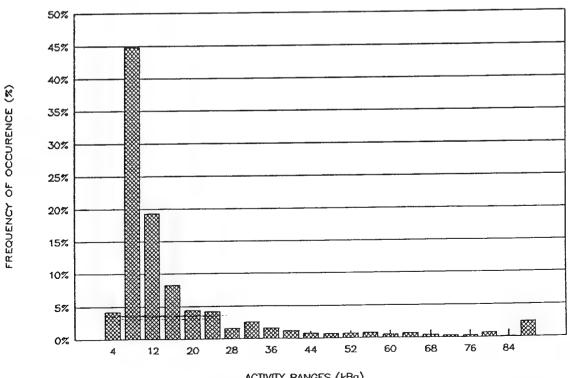
3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 12-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES.

SORTER 2 LOG DATA FOR 12-Jul-93



SORTER 1 13-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.78	± 0.04 c/sec		
SORTER SOIL DENSITY	1.3 ton	-		
GROUND SOIL DENSITY	1.65 ton	·		
GROOMD SOIL DENSITY	1.03 (51)	CONTAMINATED	CLEAN	
MASS TOTAL		0.37 tons	107.0 ton	ns
MAXIMUM/SORT		5.8 kg	58.2 kg	.5
MINIMUM/SORT		0.7 kg	52.4 kg	
VETOUT DECOVERY OF MOLENE DECOVE	·nv			99.7%
WEIGHT RECOVERY OR VOLUME RECOVE	κτ	0.20	84.8 yd ³	
EQUIVALENT SOIL-IN-GROUND		0.29 yd³	04.0 yu	US.1 YO / Gay
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)			
TOTAL		7,157 kBq		
MAXIMUM/SORT		335 k8q		
MINIMUM/SORT		2.9 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	2,440 kBq	6,776 kBq	
MAXIMUM/SORT		161 k8q	16 kBq	
MINIMUM/SORT		0 Bq	-5 kBq	
SPECIFIC ACTIVITY		6,580 Bq/kg	63 Bq/	kg
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSING	05:35 AM	END SOIL PROCESSING	03:50 PM	
LUNCH START	11:30 AM	LUNCH PERTOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	OURS (total 20-sec record			
DOWN-TIME		1.25 hr		
TOTAL SYSTEM PAU	SF	0.00 hr		
NONAVAILABLE HOU		0.0 hr		
START-UP	••	0.59 hr		
SHUT-DOWN		0.66 hr		
PLANT PERFORMANC	=	89.1%		
PRODUCTIVITY	-	89.1%		
OTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,189		
NONPROCESS RECORDS (Test, calibrate)	•	11		
20-SEC PROCESS RECORDS		1,845		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,583 AD=0 & MD=0 &	MND>0	
SOME SORT		262 AD>0&0 <md<mnd< td=""><td></td><td>(</td></md<mnd<>		(
UNEXPLAINED RECO	RDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0	-	UNEXPLAIN	PAUSE
AD=0 8			TIME	TIME
AD < 0 A			None	None
MD<0 (HOIR	

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ACT_P <5 kBq

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59 17.2%

18,450

2	-SEC CO	JNT PERIODS				10,430					
		2-SEC RECORD	S WITH S	ORTS		344	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	82		81.2%				
		3	DETECTO	RS	15		14.9%				
		4	DETECTO	RS	4		4.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	Ø		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			101					
		NET 2-SEC RE				243					
		2-SEC PERIOD	S WITH N	O SORTS		18,207					
		AVG TIME BET	MEEN 3-8	EC SORTS		151.9	sec				
								ACT D	TGOS	FREQ%	ACT_P
1-GATE S		170	ACT_ND		SPEC_A			ACT_P	(#)	PREUA	(kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kbd)
1	1	0.6%	-14000	0	-241			4000	13	3.8%	4
2	4	2.4%	-12000	0	-206			8000	142	41.3%	8
3	26	15.3%	-10000	3	-172			12000	53	15.4%	12
4	26	15.3%	-8000	3	-137			16000	33	9.6%	16
5	46	27.1%	-6000	2	-103			20000	16	4.7%	20
6	34	20.0%	-4000	7	-69			24000	13	3.8%	24
7	25	14.7%	-2000	30	-34			28000	15	4.4%	28
8	8	4.7%	0	146	0			32000	4	1.2%	32
TOTAL	170		2000	336	34			36000	9	2.6%	36
			4000	510	69			40000	6	1.7%	40
2-GATE S	ORTS	174	6000	452	103			44000	3	0.9%	44
DETECTR	SORTS	FREQ%	8000	243	137			48000	4	1.2%	48
8			10000	82	172			52000	2	0.6%	52
9	2	1.1%	12000	29	206			56000	3	0.9%	56
10	17	9.8%	14000	11	241			60000	2	0.6%	60
11	25	14.4%	16000	1	275			64000	5	1.5%	64
12	46	26.4%	18000	1	309			00086	3	0.9%	68
13	42	24.1%	20000	0	344			72000	3	0.9%	72
14	26	14.9%	22000	0	378			76000	1	0.3%	76
15	16	9.2%	24000	0	412			80000	0	0.0%	80
TOTAL	174		26000	0	447			84000	0	0.0%	84
			>28000	0	0		>	84000	14	4.1%	>84
			TOTAL	1856				TOTAL	344		
SUMMARY											
He	OT PART	ICLE EVENTS	340		SORTS BY			Y	170		
M	ULTIPAR	TICLE EVENTS	169		SORTS BY	TWO G/	ATES		174		

REC CODE EXPLANATION

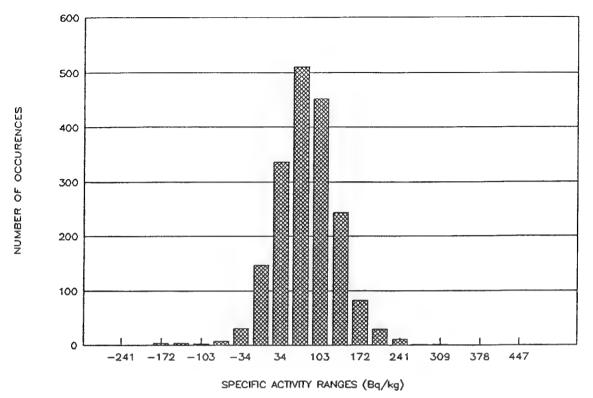
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

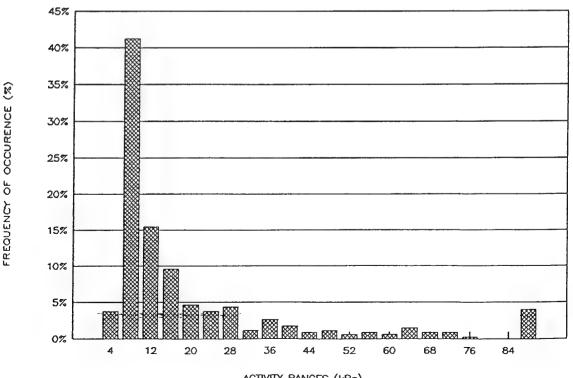
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 13-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 13-Jul-93



SORTER 2 13-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ±	0.02 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³	i		
GROUND SOIL DENSITY	1.65 tons/m ³	i		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.41 tons	107.6 tons	;
MAXIMUM/SORT		4.4 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	53.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY	1			99.6%
EQUIVALENT SOIL-IN-GROUND		0.33 yd³	85.3 yd ³	85.6 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	(E)			
TOTAL		7,526 kBq		
MAXIMUM/SORT		307 kBq		
MINIMUM/SORT		3.4 kBq		
			40 770 Le	
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	2,659 kBq	10,370 kBq	
MAXIMUM/SORT		159 kBq	20 kBq	
MINIMUM/SORT		0 Bq	-7 k8q	_
SPECIFIC ACTIVITY		6,433 Bq/kg	96 Bq/k	g
	•			
WORK HISTORY	25 22	1904 DAY END	04:30 PM	
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	05:34 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS HOL	JRS (total 20-sec records)	10.29 hr		
DOWN-TIME		1.21 hr		
TOTAL SYSTEM PAUSE		0.00 hr		
NONAVAILABLE HOURS	3	0.0 hr		
START-UP		0.57 hr		
SHUT-DOWN		0.64 hr		
PLANT PERFORMANCE		89.5%		
PRODUCTIVITY		89.5%		
_		2 270		
TOTAL SOIL PROCESSING RECORDS (2-5		2,239 3		
NONPROCESS RECORDS (Test, calibrat	tion, etc)	_		
20-SEC PROCESS RECORDS		1,853 0 MD>0 & MND=0		
TOTAL SORT		1,556 AD=0 & MD=0		
NO SORT		297 AD>0&0 <md<m< td=""><td></td><td></td></md<m<>		
SOME SORT	ne.	1) AD 2000 CAD CAD	- Andrew	-
UNEXPLAINED RECORD	1	M	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>			TIME	TIME
AD=0 &			09:17:23	None
AD<0 &	44 11.4%		-, -, -, -, -, -, -, -, -, -, -, -, -, -	
ACT_P <5 kBq	₩₩ 11.4%			

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1

2-	-SEC CO	UNT PERIODS				18,530					
		2-SEC RECORD	S WITH S	DRTS		386	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	86		80.4%				
		3	DETECTO	RS	18		16.8%				
		4	DETECTO	RS	3		2.8%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	O		0.0%				
		Т	OTAL			107					
		NET 2-SEC RE	CORDS WI	TH SORTS		279					
		2-SEC PERIOD	S WITH N	SORTS		18,251					
		AVG TIME BET	WEEN 2-SI	EC SORTS		132.8	sec				
1-GATE SC	ORTS	199	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
3	8	4.0%	-14000	0	-240			4000	12	3.1%	4
2	37	18.6%	-12000	0	-206			8000	148		8
3	29	14.6%	-10000	0	-172			12000	69	17.9%	12
4	34	17.1%	-8000	1	-137			16000	43	11.1%	16
5	38	19.1%	-6000	3	-103			20000	27	7.0%	20
6	33	16.6%	-4000	2	-69			24000	6	1.6%	24
7	19	9.5%	-2000	7	-34			28000	12	3.1%	28
8	1	0.5%	0	64	0			32000	6	1.6%	32
TOTAL	199		2000	171	34			36000	11	2.8%	36
			4000	357	69			40000	6	1.6%	40
2-GATE SO	ORTS	187	6000	432	103			44000	4	1.0%	44
DETECTR	SORTS	FREQ%	8000	408	137			48000	4	1.0%	48
8			10000	254	172			52000	1	0.3%	52
9	20	10.7%	12000	87	206			56000	3	0.8%	56
10	28	15.0%	14000	38	240			60000	3	0.8%	60
11	32	17.1%	16000	19	274			64000	7	1.8%	64
								40000	7	0.04	40

SUMMARY TOTALS

TOTAL

HOT PARTICLE EVENTS 373 SORTS BY ONE GATE ONLY 199
MULTIPARTICLE EVENTS 193 SORTS BY TWO GATES 187
DISTRIBUTED EVENTS 0

REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

19.8%

16.6%

16.0%

4.8%

>28000

TOTAL

>84000

TOTAL

0.8%

1.6%

0.0%

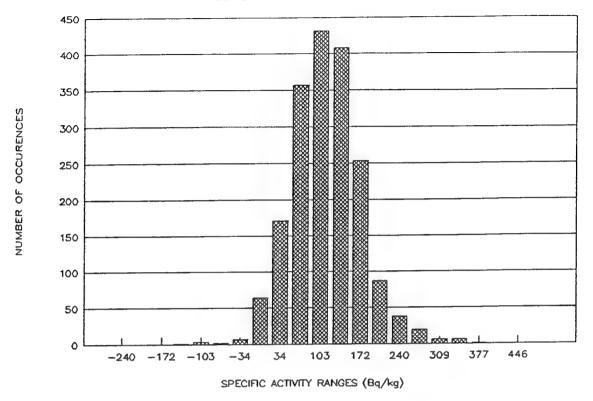
1.3%

0.0%

2.6%

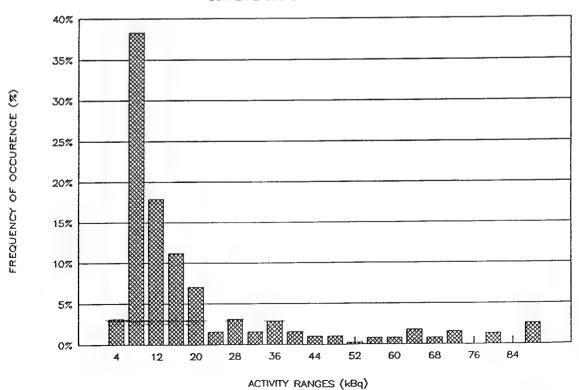
>84

SORTER 2 LOG DATA FOR 13-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 13-Jul-93



SORTER 1 14-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.75 ± 0).05 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.35 tons	106.6 tor	ns
MAXIMUM/SORT		5.1 kg	58.2 kg	
MINIMUM/SORT		0.7 kg	53.1 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.7%
EQUIVALENT SOIL-IN-GROUND		0.27 yd³	84.5 yd	84.8 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATI	= 1			
TOTAL		6,514 kBq		
MAXIMUM/SORT		541 kBq	·	
MINIMUM/SORT		3.0 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	2,226 kBq	7,917 kBd	•
MAXIMUM/SORT		308 kBq	18 kB	
MINIMUM/SORT		0 Bq	-12 k8d	•
SPECIFIC ACTIVITY		6,430 Bq/kg	74 8q,	/kg
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSING	05:27 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	RS (total 20-sec records)	10.21 hr		
DOWN-TIME		1.29 hr		
TOTAL SYSTEM PAUSE		0.01 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.46 hr		
SHUT-DOWN		0.83 hr		
PLANT PERFORMANCE		88.8%		
PRODUCTIVITY		88.8%		
TOTAL SOIL PROCESSING RECORDS (2-SI	EC and 20-SEC)	2,181		
NONPROCESS RECORDS (Test, calibrat		2		
20-SEC PROCESS RECORDS		1,838		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,582 AD=0 & MD=0 8	D <gnm 3<="" td=""><td></td></gnm>	
SOME SORT		256 AD>0&0 <md<mne< td=""><td>max&MND<mndm< td=""><td>ax</td></mndm<></td></md<mne<>	max&MND <mndm< td=""><td>ax</td></mndm<>	ax
UNEXPLAINED RECORDS	S	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & 0	MD 0		TIME	TIME
AD<0 & 1			None	08:01
ACT_P <5 kBq	58 16.9%			

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18,380

۷.	-2FF CO	ONI PEKTODS				10,300					
		2-SEC RECORD	S WITH S	ORTS		343	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	71		82.6%				
		3	DETECTO	RS	12		14.0%				
		4	DETECTO	RS	3		3.5%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	Ö		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			86					
		NET 2-SEC RE	CORDS WI	TH SORTS		257					
		2-SEC PERIOD	S WITH N	O SORTS		18,123					
		AVG TIME BET	WEEN 2-SI	EC SORTS		143.0	sec				
										5050*	ACT D
1-GATE SC	ORTS	175	ACT_ND		SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQX	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
	,	2.79	-14000	0	-241			4000	19	5.5%	4
1	4	2.3%		0	-206			8000	148		8
2	17		-12000	1	-172			12000	54		12
3	25	14.3%	-10000	0	-137			16000	32		16
4	29		-8000		-103			20000	13		20
5	39	22.3%	-6000	2	-69			24000	18		24
6	25	14.3%	-4000	23	-34			28000	9		28
7	29	16.6%	-2000	104	0			32000	5	1.5%	32
8	7	4.0%	0 2000	284	34			36000	4		36
TOTAL	175		4000	455	69			40000	7		40
		1/0		456	103			44000	2		44
2-GATE SO		168	6000 8000	299	137			48000	3		48
DETECTR	SORTS	FREQ%	10000	151	172			52000	1		52
8	43	7.1%	12000	48	206			56000	2		56
9	12 19	11.3%	14000	10	241			60000	2		60
10	25	14.9%	16000	3	275			64000	4	1.2%	64
11			18000	1	309			68000	4	1.2%	68
12	39	23.2%	20000	0	344			72000	2		72
13	39		22000	0	378			76000	3		76
14	21	12.5%	24000	0	412			80000	2		80
15	13	7.7%	26000	0	412			84000	1	0.3%	84
TOTAL	168		>28000	0	0			84000	8		>84
			~Z0000		U				7/7		

1840

REC CODE EXPLANATION

SUMMARY TOTALS

1.00 Source check (Soil on belt)

TOTAL

341

0

2.00 Empty belt

HOT PARTICLE EVENTS

DISTRIBUTED EVENTS

MULTIPARTICLE EVENTS 133

2-SEC COUNT PERIODS

3.00 Test (No process soil)

File S1JA0714.WR1

TOTAL

343

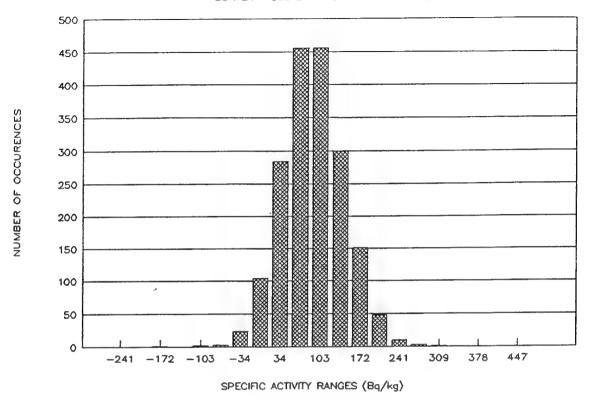
175

168

SORTS BY ONE GATE ONLY

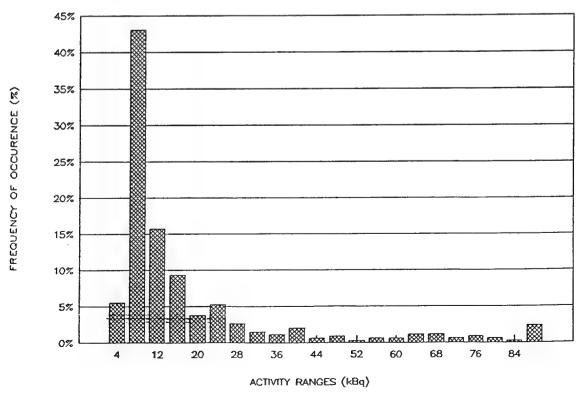
SORTS BY TWO GATES

SORTER 1 LOG DATA FOR 14-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 14-Jul-93



SORTER 2 14-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.	01 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³			
GROUND SOIL DENSITY	1.65 tons/m³			
discours series and a		CONTAMINATED	CLEAN	
MASS TOTAL		0.37 tons	106.3 tons	
MAXIMUM/SORT		8 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	50.2 kg	
				99.7%
WEIGHT RECOVERY OR VOLUME RECOVER	Υ		84.3 yd3	84.6 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.29 yd3	04.5 yu	04.0 /0 /00/
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL	. – •	7,595 k8q		
MAXIMUM/SORT		207 kBq		
MINIMUM/SORT		3.3 k8q		
	OTTHETE'S ACTIVITY	2,536 kBq	10,570 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	173 k8q	17 kBq	
MAXIMUM/SORT		0 Bq	-3 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		6,834 Bq/kg	99 Bq/ks)
SPECIFIC ACTIVITY				
WORK HISTORY			0/ -70 DM	
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM 03:38 PM	
START SOIL PROCESSING	05:29 AM	END SOIL PROCESSING LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM	LONCH PERIOD	0.0	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS HO	URS (total 20-sec records)	10.17 hr		
DOWN-TIME		1.33 hr		
TOTAL SYSTEM PAUS	E	0.00 hr		
NONAVAILABLE HOUR	S	0.0 hr		
START-UP		0.48 hr		
SHUT-DOWN		0.85 hr 88.4%		
PLANT PERFORMANCE		88.4%		
PRODUCTIVITY		00.4%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,174		
NONPROCESS RECORDS (Test, calibra		11		
20-SEC PROCESS RECORDS		1,830		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,567 AD=0 & MD=0 1		
SOME SORT		263 AD>0&0 <md<mni< td=""><td>Vewnnw⊳nnm9xewn</td><td></td></md<mni<>	Vewnnw⊳nnm9xewn	
UNEXPLAINED RECOR		0	INEVOLATA	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN TIME	TIME
AD=0 8			None	None
AD<0 8			NOTICE TO SERVICE TO S	
ACT_P <5 kBq	53 15.4%			

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1

83.3%

344 (ACT_P >0 kBq)

18,300

95

		•	. DETECTO	11.3	,,,		03.3%			
		3	DETECTO	RS	17		14.9%			
		4	DETECTO	RS	2		1.8%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			114				
		NET 2-SEC RE	CORDS WI	TH SORTS		230				
		2-SEC PERIOD	S WITH N	O SORTS		18,070				
		AVG TIME BET	WEEN 2-S	EC SORTS		159.1	sec			
1-GATE	SORTS	172	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(k8q)
1	9	5.2%	-14000	0	-240		4000	9	2.6%	4
2	28	16.3%	-12000	0	-206		8000	141	41.0%	8
3	21	12.2%	-10000	0	-172		12000	46	13.4%	12
4	32	18.6%	-8000	1	-137		16000	29	8.4%	16
5	32	18.6%	-6000	4	-103		20000	19	5.5%	20
6	23	13.4%	-4000	1	-69		24000	18	5.2%	24
7	22	12.8%	-2000	15	-34		28000	11	3.2%	28
8	5	2.9%	0	49	D		32000	6	1.7%	32
TOTAL	172		2000	174	34		36000	4	1.2%	36
			4000	295	69		40000	3	0.9%	40
2-GATE	SORTS	172	6000	401	103		44000	7	2.0%	44
DETECTR	SORTS	FREQ%	8000	448	137		48000	3	0.9%	48
8			10000	296	172		52000	4	1.2%	52
9	19	11.0%	12000	113	206		56000	7	2.0%	56
10	23	13.4%	14000	36	240		60000	7	2.0%	60
11	29	16.9%	16000	7	274		64000	2	0.6%	64
12	31	18.0%	18000	1	309		68000	3	0.9%	68
13	29	16.9%	20000	0	343		72000	3	0.9%	72
14	26	15.1%	22000	0	377		76000	4	1.2%	76
15	15	8.7%	24000	0	412		80000	2	0.6%	80
TOTAL	172		26000	0	446		84000	2	0.6%	84
			>28000	0	0		>84000	14	4.1%	>84
			TOTAL	1841			TOTAL	344		
SUMMARY	TOTALS									
ł	OT PART	ICLE EVENTS	339		SORTS BY			172		
ŀ	MULTIPART	TICLE EVENTS	171		SORTS BY	TWO GA	NTES	172		
E	ISTRIBUT	TED EVENTS	0							

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

2-SEC COUNT PERIODS

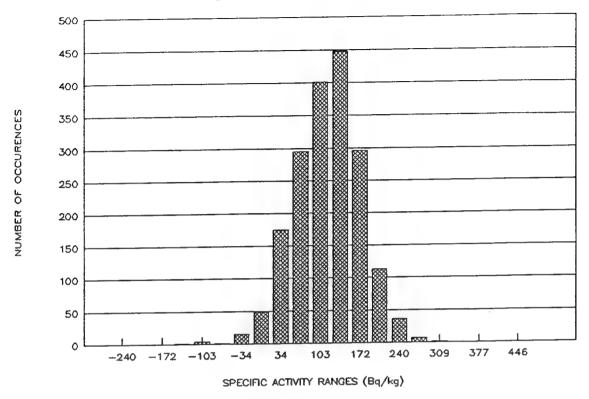
2-SEC RECORDS WITH SORTS

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

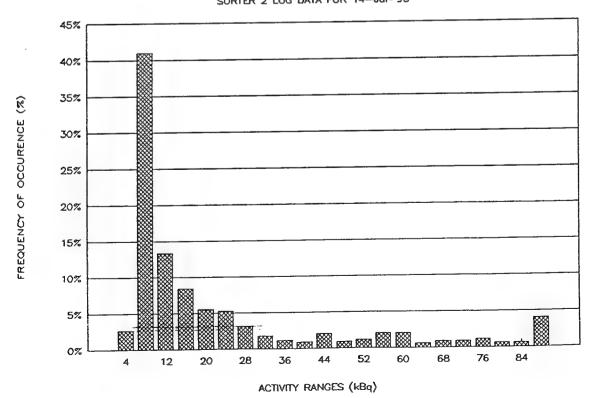
2 DETECTORS

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 14-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 14-Jul-93



SORTER	1 15-Jul-93								
			0.7/	± 0.05	0/000				
	E BACKGROUND COUNT RATE		0.74 1.3 to		c/sec				
	SOIL DENSITY		1.65 to	•					
GROOND	SOIL DENSITY		1.05 (#13/ III	CONTAM	INATED	CLEAN		
MACC T	OTAL					tons	94.2	tons	
MASS TO					61.1		58.2		
	MAXIMUM/SORT MINIMUM/SORT				0.7	-	52.4	_	
	HININGTY SORT								
UF I GHT	RECOVERY OR VOLUME RECOVER	Υ							99.6%
	LENT SOIL-IN-GROUND				0.27	yd³	74.7	yd3	75.0 yd3/day
PARTIC	LE ACTIVITY (MAXIMUM ESTIMA	TE)							
	TOTAL				5,437	kBq			
	MAXIMUM/SORT				377	kBq			
	MINIMUM/SORT				2.9	kBq			
							-		
DISPER	SED + PARTICLE (REALISTIC E	STIMATE) ACTI	VITY		1,846	•	7,096	•	
	MAXIMUM/SORT					kBq		kBq	
	MINIMUM/SORT					Bq		kBq	
	SPECIFIC ACTIVITY				5,435	Bq/kg	75	Bq/kg	
WORK H	ISTORY								
	WORK DAY START	05:00 AM			WORK DA	AY END	03:30 PM		
	PLANT START-UP	05:00 AM			PLANT :	SHUT-DOWN	03:30 PM		
	START SOIL PROCESSING	05:43 AM			END SO	IL PROCESSING	02:52 PM		
	LUNCH START	11:30 AM			LUNCH F	PERIOD	0.0	hr	
	HOOK HOURS					10.5 hr			
	WORK HOURS AVAILABLE HOURS					10.5 hr			
	ACTUAL PROCESS HO	IPS (total 20	-980 F800	rds)		9.03 hr			
	DOWN-TIME	ons (total Es	000 1000			1.47 hc			
	TOTAL SYSTEM PAUS	F				0.14 hr			
	NONAVAILABLE HOUR					0.0 hr			
	START-UP					0.73 hr			
	SHUT-DOWN					0.62 hr			
	PLANT PERFORMANCE					86.0%			
	PRODUCTIVITY					86.0%			
		050 30 05	C)			1 90/			
	SOIL PROCESSING RECORDS (2-		C)			1,894 22			
NONPROCESS RECORDS (Test, calibration, etc)					1,625	~~			
	20-SEC PROCESS RECORDS					0=0NM & 0<0M			
	TOTAL SORT NO SORT					AD=0 & MD=0 &	MND>0		
	SOME SORT				-	AD>0&0 <md<mn0< td=""><td></td><td>Dmax</td><td></td></md<mn0<>		Dmax	
	UNEXPLAINED RECOR	ns			0				
	0 <ad<1kbq &="" md="">0</ad<1kbq>	0			•		UNEXPLAIN	P	AUSE
	AD=0 &						TIME		TIME
	AD<0 &						06:19:28		06:11

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2-SEC COUNT PERIODS	16,25	0
2-SEC RECORDS WITH SORTS	26	9 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	R
2 DETECTORS	70	85.4%
3 DETECTORS	11	13.4%
4 DETECTORS	1	1.2%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	8	2
NET 2-SEC RECORDS WITH SORTS	18	7
2-SEC PERIODS WITH NO SORTS	16,06	3
AVG TIME BETWEEN 2-SEC SORTS	173.	8 sec

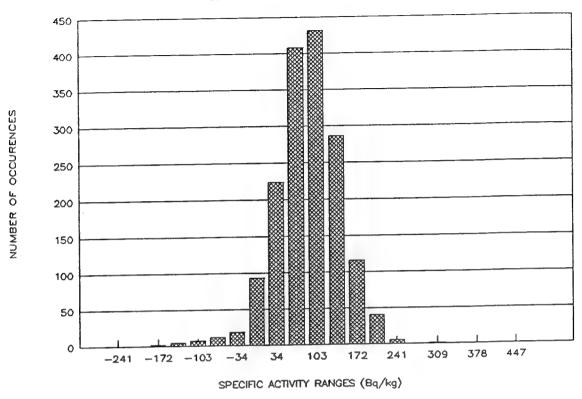
1-GATE SORTS		142	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
									,
1	2	1.4%	-14000	0	-241	4000	20	7.4%	4
2	13	9.2%	-12000	0	-206	8000	101	37.5%	8
3	24	16.9%	-10000	2	-172	12000	44	16.4%	12
4	21	14.8%	-8000	4	-137	16000	38	14.1%	16
5	21	14.8%	-6000	7	-103	20000	8	3.0%	20
6	25	17.6%	-4000	11	-69	24000	6	2.2%	24
7	28	19.7%	-2000	18	-34	28000	8	3.0%	28
8	8	5.6%	0	93	0	32000	5	1.9%	32
TOTAL	142		2000	224	34	36000	2	0.7%	36
			4000	408	69	40000	3	1.1%	40
2-GATE SO	2-GATE SORTS 127		6000	432	103	44000	1	0.4%	44
DETECTR	SORTS	FREQ%	8000	286	137	48000	1	0.4%	48
8			10000	116	172	52000	3	1.1%	52
9	5	3.9%	12000	40	206	56000	4	1.5%	56
10	15	11.8%	14000	5	241	60000	6	2.2%	60
11	31	24.4%	16000	0	275	64000	2	0.7%	64
12	20	15.7%	18000	1	309	68000	2	0.7%	68
13	21	16.5%	20000	0	344	72000	4	1.5%	72
14	18	14.2%	22000	0	378	76000	2	0.7%	76
15	17	13.4%	24000	0	412	80000	3	1.1%	80
TOTAL	127		26000	0	447	84000	0	0.0%	84
(01112			>28000	0	0	>84000	6	2.2%	>84
			TOTAL	1647		TOTAL	269		
SUMMARY 1	TOTALS								
HOT PARTICLE EVENTS		264		SORTS BY	ONE GATE ONLY	142			
MULTIPARTICLE EVENTS			118		SORTS BY	TWO GATES	127		
DISTRIBUTED EVENTS			83						

REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

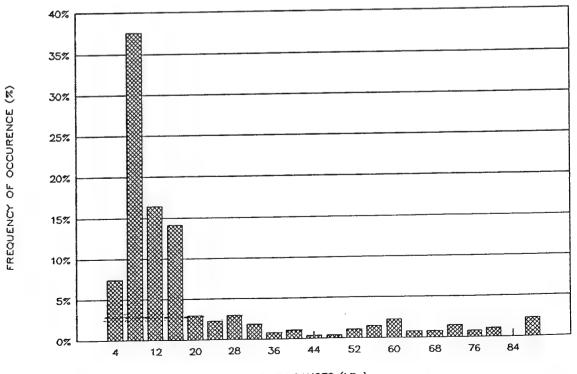
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SORTER 1 LOG DATA FOR 15-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 15-Jul-93



ACTIVITY RANGES (kBq)

SORTER 2	15-Jul-93										
AVERAGE BACKGROUN	COUNT RATE		0.79	±	0.03	c/sec					
SORTER SOIL DENSI			1.3	tons/m	3						
GROUND SOIL DENSI			1.65	tons/m³	3						
						CONTAM	INATED	CLEAN			
MASS TOTAL						0.35	tons		tons		
MAXIMUM/SOI	RT					61.3	kg	58.3			
MINIMUM/SO	RT					0.7	kg	52.4	kg		
										00.4%	
WEIGHT RECOVERY OF	R VOLUME RECOVERY							~ .	45	99.6%	1 (dov
EQUIVALENT SOIL-II	N-GROUND					0.28	Aq,	75.5	Aq ₃	75.8 yd	· / uay
PARTICLE ACTIVITY	(MAXIMUM ESIIMATE	,				6,927	kRa				
TOTAL	-					•	kBq				
MAXIMUM/SO							kBq				
MINIMUM/SO	RI										
DICHERCEN 4 DARTII	CLE (REALISTIC EST	IMATE) ACTIV	'ITY			2,291	kBq	2,691	kBq		
MAXIMUM/SO							kBq	14	k8q		
MINIMUM/SO						0	Bq	-8	kBq		
SPECIFIC A						6,552	Bq/kg	28	8q/kg		
WORK HISTORY											
WORK DAY S	TART	05:00 AM				WORK D	AY END	03:30 PM			
PLANT STAR	T-UP	05:00 AM					SHUT-DOWN	03:30 PM			
START SOIL	PROCESSING	05:43 AM					IL PROCESSING				
LUNCH STAR	T	11:30 AM				LUNCH	PER100	0.0	ħΓ		
•	ODK HOHBS						10.5 հո				
	ORK HOURS VAILABLE HOURS						10.5 hr				
	CTUAL PROCESS HOUR	S (total 20-	sec re	cords)			9.11 hr				
	OWN-TIME	• ((11111111111111111111111111111111111					1.39 hr				
_	OTAL SYSTEM PAUSE						0.14 hr				
•	ONAVAILABLE HOURS						0.0 hr				
	TART-UP						0.73 hr				
	HUT-DOWN						0.54 hr				
	LANT PERFORMANCE						86.8%				
	RODUCTIVITY						86.8%				
	SING RECORDS (2-SE		:)				1,923 7				
NONPROCESS RECORDS (Test, calibration, etc)						1 (/0	•				
	CESS RECORDS					1,640	MD>0 & MND=0				
	OTAL SORT						8 0=0M & 0=0A	U<00MM			
	O SORT						DAM>0&0-UA DAM>0&0 <qa< td=""><td></td><td>NDmax</td><td></td><td></td></qa<>		NDmax		
	OME SORT					217		munum mo m			
	NEXPLAINED RECORDS					·	•	UNEXPLAI	N I	PAUSE	
0	<ad<1kbq &="" md="">0</ad<1kbq>	0 in 1						TIME		TIME	
	AD=0 & M							06:19:28		06:11	
_	AD<0 & M	10 M 31	11.07	Y							
A	CT_P <5 kBq	1	11.07	•							

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101

16,400

	2-	SEC CO	ONI PERIODS				.0,.00					
			2-SEC RECORD	S WITH S	ORTS		283	(ACT_P	>0 kBq)			
			2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	ETECTOR					
			2	DETECTO	RS	64		86.5%				
			3	DETECTO	RS	10		13.5%				
			4	DETECTO	RS	0		0.0%				
			5	DETECTO	RS	0		0.0%				
			6	DETECTO	RS	0		0.0%				
			7	DETECTO	RS	0		0.0%				
			8	DETECTO	RS	0		0.0%				
			ī	OTAL			74					
			NET 2-SEC RE	CORDS WI	TH SORTS		209					
			2-SEC PERIOD	S WITH N	O SORTS		16,191					
			AVG TIME BET	WEEN 2-S	EC SORTS		156.9	sec				
4			450	ACT NO	WWOED	CDCC A			ACT_P	SUBT	FREQ%	ACT_P
	TE SO		159	ACT_ND		SPEC_A			(Bq)	(#)	11044	(kBq)
DETE	CIR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(pq)	(#)		(404)
	1	6	3.8%	-14000	0	-240			4000	4	1.4%	4
	2	23		-12000	0	-206			8000	99	35.0%	8
	3	23		-10000	1	-172			12000	62	21.9%	12
	4	36		-8000	1	-137			16000	35	12.4%	16
	5	28		-6000	9	-103			20000	9	3.2%	20
	6	23	14.5%	-4000	56	-69			24000	15	5.3%	24
	7	16	10.1%	-2000	131	-34			28000	9	3.2%	28
	8	4	2.5%	0	311	0			32000	2	0.7%	32
TOTA	AL	159		2000	452	34			36000	2	0.7%	36
				4000	334	69			40000	5	1.8%	40
2-GA1	TE SO	RTS	124	6000	183	103			44000	4	1.4%	44
DETEC	CTR	SORTS	FREQ%	8000	108	137			48000	4	1.4%	48
	8			10000	40	172			52000	1	0.4%	52
	9	9	7.3%	12000	15	206			56000	2		56
1	10	14	11.3%	14000	5	240			60000	3	1.1%	60
1	11	21	16.9%	16000	1	274			64000	1	0.4%	64
1	12	28	22.6%	18000	0	309			68000	6		88
1	13	22	17.7%	20000	0	343			72000	3	1.1%	72
1	14	20	16.1%	22000	0	377			76000	5	1.8%	76
1	15	10	8.1%	24000	0	412			80000	2	0.7%	80
TOTA	AL	124		26000	0	446			84000	1	0.4%	84
				>28000	0	0		>	84000	9	3.2%	>84
				TOTAL	1647				TOTAL	283		

REC CODE EXPLANATION

SUMMARY TOTALS

1.00 Source check (Soil on belt)

258

138

84

2.00 Empty belt

HOT PARTICLE EVENTS MULTIPARTICLE EVENTS

DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

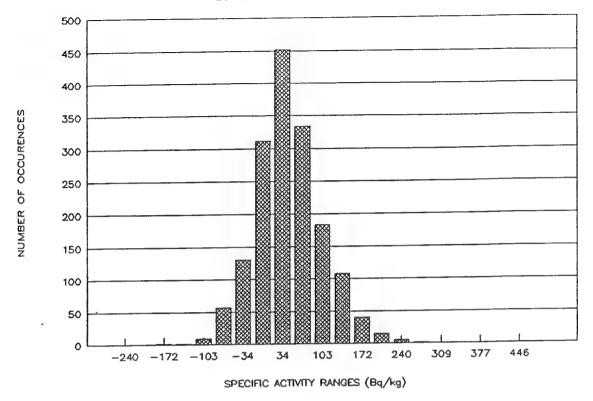
3.00 Test (No process soil)

SORTS BY ONE GATE ONLY

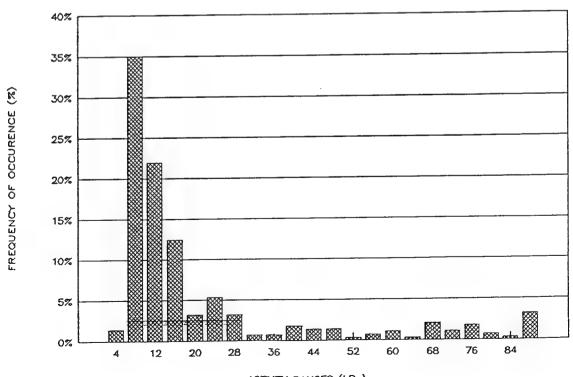
SORTS BY TWO GATES

159

SORTER 2 LOG DATA FOR 15-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 15-Jul-93



AVERAGE BACKGROUND COUNT RATE SORTER SOIL DENSITY 1.3 tons/m³ 1.65 tons/m³ MASS TOTAL MAXIMUM/SORT MINIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START PLANT START-UP WORK DAY START MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE	CONTAMINATED 0.72 tons 58.2 kg 0.7 kg 0.57 yd³ 9,465 kBq 589 kBq 2.9 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	58.2 49.5 64.6 7,456 21 -4 92 03:30 PM 03:30 PM	tons kg kg yd³ kBq kBq kBq	99.1% 65.2 yd³/day
GROUND SOIL DENSITY 1.65 tons/m³ MASS TOTAL MAXIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY MORK HISTORY WORK DAY START PLANT START-UP START SOIL PROCESSING MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	0.72 tons 58.2 kg 0.7 kg 0.57 yds 9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	81.5 58.2 49.5 64.6 7,456 21 -4 92 03:30 PM 03:30 PM 03:03 PM	tons kg kg yd³ kBq kBq kBq	
MASS TOTAL MAXIMUM/SORT MINIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY MORK DAY START MORK DAY START MORK HISTORY WORK DAY START MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	0.72 tons 58.2 kg 0.7 kg 0.57 yds 9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	81.5 58.2 49.5 64.6 7,456 21 -4 92 03:30 PM 03:30 PM 03:03 PM	tons kg kg yd³ kBq kBq kBq	
MAXIMUM/SORT MINIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY MORK DAY START PLANT START-UP START SOIL PROCESSING MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	0.72 tons 58.2 kg 0.7 kg 0.57 yds 9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	81.5 58.2 49.5 64.6 7,456 21 -4 92 03:30 PM 03:30 PM 03:03 PM	tons kg kg yd³ kBq kBq kBq	
MAXIMUM/SORT MINIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START PLANT START-UP START SOIL PROCESSING MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	58.2 kg 0.7 kg 0.57 yd³ 9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	58.2 49.5 64.6 7,456 21 -4 92 03:30 PM 03:30 PM 03:03 PM	kg kg yd³ kBq kBq kBq/kg	
MINIMUM/SORT MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START PLANT START-UP START SOIL PROCESSING MOS:43 AM LUNCH START MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	0.7 kg 0.57 yd³ 9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	7,456 21 -4 92 03:30 PM 03:33 PM	kg yd³ kBq kBq Bq/kg	
MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START D5:00 AM START SOIL PROCESSING START SOIL PROCESSING O5:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING	7,456 21 -4 92 03:30 PM 03:30 PM 03:03 PM	yd³ kBq kBq kBq Bq/kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START PLANT START-UP START SOIL PROCESSING START SOIL PROCESSING WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	7,456 21 -4 92 03:30 PM 03:30 PM 03:03 PM	kBq kBq kBq Bq/kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START PLANT START-UP START SOIL PROCESSING MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	9,465 kBq 589 kBq 2.9 kBq 3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	7,456 21 -4 92 03:30 PM 03:30 PM 03:03 PM	kBq kBq kBq Bq/kg	65.2 yd³/day
TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START DS:00 AM PLANT START-UP START SOIL PROCESSING START SOIL PROCESSING MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	589 kBq 2.9 kBq 3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	21 -4 92 03:30 PM 03:30 PM 03:03 PM	kBq kBq Bq/kg	
MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START D5:00 AM PLANT START-UP D5:00 AM START SOIL PROCESSING D5:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	589 kBq 2.9 kBq 3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	21 -4 92 03:30 PM 03:30 PM 03:03 PM	kBq kBq Bq/kg	
MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START PLANT START-UP START SOIL PROCESSING UNCH START MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	2.9 kBq 3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	21 -4 92 03:30 PM 03:30 PM 03:03 PM	kBq kBq Bq/kg	
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START PLANT START-UP START SOIL PROCESSING MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	3,460 kBq 300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING	21 -4 92 03:30 PM 03:30 PM 03:03 PM	kBq kBq Bq/kg	
MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START D5:00 AM PLANT START-UP D5:00 AM START SOIL PROCESSING D5:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	300 kBq 0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	21 -4 92 03:30 PM 03:30 PM 03:03 PM	kBq kBq Bq/kg	
MINIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY WORK DAY START 05:00 AM PLANT START-UP 05:00 AM START SOIL PROCESSING 05:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	0 Bq 4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	-4 92 03:30 PM 03:30 PM 03:03 PM	k8q Bq/kg	
SPECIFIC ACTIVITY WORK HISTORY WORK DAY START 05:00 AM PLANT START-UP 05:00 AM START SOIL PROCESSING 05:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	4,807 Bq/kg WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	92 03:30 PM 03:30 PM 03:03 PM	Bq/kg	
WORK HISTORY WORK DAY START 05:00 AM PLANT START-UP 05:00 AM START SOIL PROCESSING 05:43 AM LUNCH START 11:30 AM MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	WORK DAY END PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	03:30 PM 03:30 PM 03:03 PM		
WORK DAY START 05:00 AM PLANT START-UP 05:00 AM START SOIL PROCESSING 05:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	03:30 PM 03:03 PM		
PLANT START-UP 05:00 AM START SOIL PROCESSING 05:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	PLANT SHUT-DOWN END SOIL PROCESSING LUNCH PERIOO	03:30 PM 03:03 PM		
START SOIL PROCESSING 05:43 AM LUNCH START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	END SOIL PROCESSING LUNCH PERIOO	03:03 PM		
LUNCH START WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	LUNCH PERIOO			
WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN		0.5		
AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	40.04		hr	
ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	10.0 hr			
DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	10.0 hr			
TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN	7.84 hr			
NONAVAILABLE HOURS START-UP SHUT-DOWN	2.16 hr			
START-UP SHUT-DOWN	1.50 hr	•		
SHUT-DOWN	0.0 hr			
	0.73 hr			
PLANT PERFORMANCE	0.44 hr			
	78.4%			
PRODUCTIVITY	78.4%			
OTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,982			
ONPROCESS RECORDS (Test, calibration, etc)	1			
20-SEC PROCESS RECORDS	1,412			
TOTAL SORT	2 MD>0 & MND=0			
NO SORT	1,090 AD=0 & MD=0 &	MND>0		
SOME SORT	320 AD>0&0 <md<mn0< td=""><td>NM> GNM&xsm(</td><td>10max</td><td></td></md<mn0<>	NM> GNM&xsm(10max	
UNEXPLAINED RECORDS	0			
0 <ad<1kbq &="" md="">0 0</ad<1kbq>		UNEXPLAIN	i P	AUSE
AD=0 & MD 0		TIME		TIME
AD<0 & MD 0		None		11:25

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570 (ACT_P >0 kBq)

14,120

		E SEC RECORD						•		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	134	82.7%				
		3	DETECTO	RS	25	15.4%				
		4	DETECTO	RS	3	1.9%				
		5	DETECTO	RS	0	0.0%				
		6	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	0	0.0%				
		т	OTAL			162				
		NET 2-SEC RE				408				
		2-SEC PERIOD	S WITH N	O SORTS		13,712				
		AVG TIME BET	WEEN 2-S	EC SORTS		69.2 sec				
1-GATE S	ORTS	291	ACT_ND		SPEC_A		ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	1		-14000	0			4000	28	4.9%	4
2	20	6.9%		0			8000	263		8
3	39	13.4%	-10000	1			12000	99		12
4	51	17.5%	-8000	0			16000	42	7.4%	16
5	59	20.3%		0			20000	26		20
6	52	17.9%		1			24000	22		24
7	48	16.5%		19			28000	15		28
8	21	7.2%	0	61	0		32000	14		32
TOTAL	291		2000	187			36000	7		36
			4000	316	69		40000	5		40
2-GATE S	ORTS	279	6000	349			44000	10		44
DETECTR	SORTS	FREQ%	8000	200	137		48000	5	0.9%	48
8			10000	125	172		52000	6	1.1%	52 54
9	6	2.2%	12000	62	206		56000	2	0.4%	56
10	33	11.8%	14000	28			60000	4	0.7%	60
11	48	17.2%	16000	33	275		64000	1	0.2%	64
12	60	21.5%	18000	20			68000	2	0.4%	88
13	54	19.4%	20000	7			72000	5	0.9%	72
14	43	15.4%	22000	4			76000	1		76
15	35	12.5%	24000	0			00008	2		80
TOTAL	279		26000	0	447		84000	2	0.4%	84

0

SORTS BY ONE GATE ONLY

SORTS BY TWO GATES

0

1413

>84000

TOTAL

9

570

291

279

1.6%

>84

DISTRIBUTED EVENTS

REC CODE EXPLANATION

SUMMARY TOTALS

1.00 Source check (Soil on belt)

>28000

TOTAL

551

286

152

2.00 Empty belt

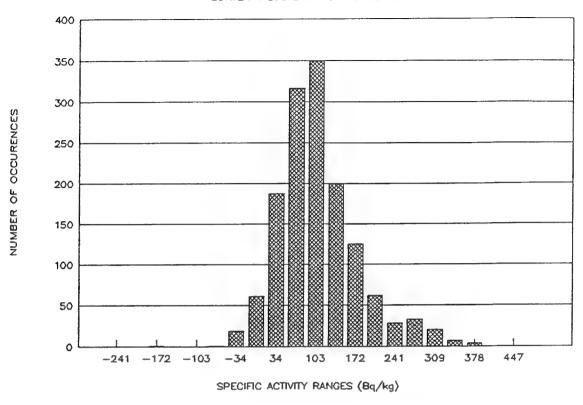
HOT PARTICLE EVENTS

MULTIPARTICLE EVENTS

2-SEC COUNT PERIODS

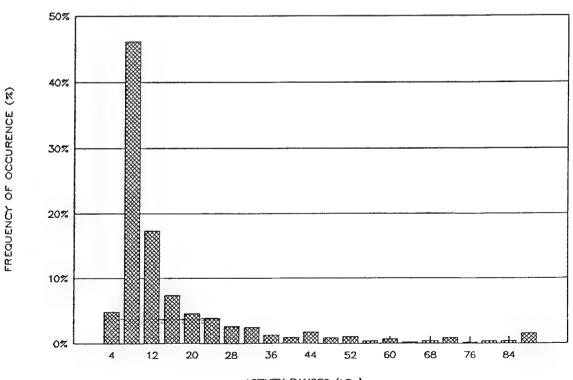
2-SEC RECORDS WITH SORTS

SORTER 1 LOG DATA FOR 16-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 16-Jul-93



16-Jul-93										
ROUND COUNT RATE		0.	.79	±	0.03	c/sec				
ENSITY		1	1.3	tons/m	3					
ENSITY		1.	.65	tons/m	3					
						CONTAM	INATED			
						0.78	tons			
M/SORT						58.3	kg		-	
M/SORT						0.7	kg	50.2	kg	
PY OR VOLUME RECOVER	Y									99.0%
IL-IN-GROUND	•					0.62	Aq ₂	64.3	yd3	65.0 yd³/day
ULTY ZMAVINIM ECTIMA	TE \									
	167					16.341	kBa			
						•				
						•	-			
M/SOKT										
ADTICLE (DEALISTIC F	STIMATE) AC	CTIVITY	1			4,832	k8q	3,607	kBq	
	0,110,10					•		20	kBq	
	*					-142	8q	-8	kBq	
IC ACTIVITY						6,176	Bq/kg	44	Bq/kg	
AV CTART	05-00 A	4				WORK D	AY END	03:30 PM		
								03:30 PM		
								03:01 PM		
START									hr	
HOOK HOUSE							10.0 hr			
	IIDS (total	20-sec		cords						
	OKS (LOLAL	20-360	, , ,	CO1 G3 /						
	_						1.50 hr			
							0.0 hr			
	3						0.73 hr			
							0.47 hr			
							78.1%			
PRODUCTIVITY							78.1%			
OCCOSTNO BECCORDO /3-	SEC and 30.	-SEC)					2,046			
							7			
	CTORY ELL)					1,406				
						_				
									NDmax	
	ns									
		3						UNEXPLAI	N	PAUSE
S 0=QA		0						TIME		TIME
/U-0 €		-								44 25
& 0>QA	. MD	1						05:48:34		11:25
	ENSITY ENSITY M/SORT M/SORT RY OR VOLUME RECOVER IL-IN-GROUND VITY (MAXIMUM ESTIMA M/SORT M/SORT M/SORT M/SORT M/SORT M/SORT IC ACTIVITY AY START START-UP SOIL PROCESSING START WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HO DOWN-TIME TOTAL SYSTEM PAUS NONAVAILABLE HOUR START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY OCESSING RECORDS (2- CORDS (Test, calibra PROCESS RECORDS TOTAL SORT NO SORT SOME SORT	ENSITY ENSITY M/SORT M/SORT RY OR VOLUME RECOVERY IL-IN-GROUND VITY (MAXIMUM ESTIMATE) M/SORT M/SORT M/SORT M/SORT IC ACTIVITY AY START 05:00 AM START-UP 05:00 AM START-UP 05:00 AM START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY OCESSING RECORDS (2-SEC and 20 CORDS (Test, calibration, etc) PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS	ENSITY ENSITY ENSITY M/SORT M/SORT RY OR VOLUME RECOVERY IL-IN-GROUND VITY (MAXIMUM ESTIMATE) M/SORT M/SORT M/SORT M/SOR	ENSITY 1.3 ENSITY 1.65 M/SORT M/SORT RY OR VOLUME RECOVERY IL-IN-GROUND VITY (MAXIMUM ESTIMATE) M/SORT M/SORT M/SORT M/SORT M/SORT IC ACTIVITY AY START 05:00 AM START-UP 05:00 AM START-UP 05:00 AM START 11:30 AM WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec redown-time TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY OCCESSING RECORDS (2-SEC and 20-SEC) CORDS (Test, calibration, etc) PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS	ENSITY 1.3 tons/m H/SORT H/SORT H/SORT RY OR VOLUME RECOVERY IL-IN-GROUND VITY (MAXIMUM ESTIMATE) H/SORT H/SO	ENSITY 1.3 tons/m³ ENSITY 1.65 tons/m³ M/SORT M/SORT RY OR VOLUME RECOVERY IL-IN-GROUND VITY (MAXIMUM ESTIMATE) M/SORT M/S	ENSITY 1.65 tons/m³ ENSITY 1.65 tons/m³ CONTAM 0.78 M/SORT 58.3 M/SORT 0.7 RY OR VOLUME RECOVERY IL-IN-GROUND 0.62 VITY (MAXIMUM ESTIMATE) 16,341 M/SORT 1,783 ARTICLE (REALISTIC ESTIMATE) ACTIVITY 4,832 M/SORT 1112 ARTICLE (REALISTIC ESTIMATE) ACTIVITY 6,176 AY START 05:00 AM WORK D START-UP 05:00 AM END SO START 11:30 AM LUNCH WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PROUCTIVITY DOCESSING RECORDS (2-SEC and 20-SEC) CORDS (Test, calibration, etc) PROCESS RECORDS 1,406 TOTAL SORT 2 NO SORT 1,060 SOME SORT 1,060 TOME SORT 1,060 AVAILABLE HOURD 1,406 AVAILABLE HOURS 1,406 AVAILABLE HOURS 1,406 TOTAL SORT 1,060 AVAILABLE HOURD 1,406 AVAILABLE HOURS	ENSITY 1.3 tons/m² 1.65 tons/m³ CONTAMINATED 0.78 tons 4/SORT 58.3 kg 0.7 kg RY OR VOLUME RECOVERY IL-IN-GROUND 0.62 yd³ VITY (MAXIMUM ESTIMATE) W/SORT 1,783 k8q 1,783 k8q 1,783 k8q 3.2 k8q ARTICLE (REALISTIC ESTIMATE) ACTIVITY 4,832 k8q ARTICLE (REALISTIC ESTIMATE) ACTIVITY 4,832 k8q ARTICLE (REALISTIC ESTIMATE) ACTIVITY 4,832 k8q INJORT -142 8q 4/SORT -142 8q 6,176 8q/kg AY START 05:00 AM WORK DAY END START-UP 05:00 AM PLANT SHUT-DOWN SOIL PROCESSING 05:43 AM END SOIL PROCESSING START 11:30 AM LUNCH PERIOD WORK HOURS ACTUAL PROCESS HOURS (total 20-sec records) 7.81 hr TOTAL SYSTEM PAUSE 1.50 hr NONAVAILABLE HOURS 10.0 hr START-UP SHUT-DOWN 1.50 hr NONAVAILABLE HOURS 7.81 hr START-UP SHUT-DOWN 1.50 hr START-UP 0.73 hr START-UP 0.73 hr START-UP 0.73 hr START-UP 0.73 hr OCESSING RECORDS (2-SEC and 20-SEC) 2,046 TOTAL SORT 78.1% COCESSING RECORDS (2-SEC and 20-SEC) 2,046 TOTAL SORT 1,406 TOTAL SORT 1,4	1.3 tons/m² 1.65 tons/m² 1.67 tons 1.67 tons	ENSITY 1.3 tons/m³ ENSITY 1.65 tons/m³ ENSITY 1.65 tons/m³ CONTAMINATED CLEAN 0.78 tons 81.2 tons 81.2 tons 81.2 tons 85.3 kg 58.3 kg 58.3 kg 70.7 kg 50.2 kg PY OR VOLUME RECOVERY 11-1N-GROUND 0.62 yd³ 64.3 yd³ VITY (MAXIMUM ESTIMATE) W/SORT 1,783 kBq M/SORT 1,783 kBq M/SORT 3.2 kBq ARTICLE (REALISTIC ESTIMATE) ACTIVITY 4,832 kBq 3,607 kBq M/SORT 1,1783 kBq M/SORT 1112 kBq 20 kBq 1112 kBq 20 kBq 1112 kBq 20 kBq 1112 kBq 44 Bq/kg AY START 05:00 AM WORK DAY END 03:30 PM PLANT SHUT-DOMN 03:30 PM PLANT SHUT-DOMN 03:30 PM START-UP 05:00 AM PLANT SHUT-DOMN 03:30 PM START 11:30 AM LUNCH PERIOD 0.5 hr WORK HOURS 10:00 hr AVAILABLE HOURS 10:00 hr TOTAL SYSTEM PAUSE 10:00 hr TOTAL SYSTEM PAUSE 10:00 hr TOTAL SYSTEM PAUSE 10:00 hr START-UP 0.73 hr SHUT-DOMN 0.47 hr PLANT PERFORMANCE 78:11% PRODUCTIVITY 78:11% COESSING RECORDS (2-SEC and 20-SEC) 2,046 TOTAL SORT 78:11% COESSING RECORDS (2-SEC and 20-SEC) 2,046 TOTAL SORT 1,060 AD=0 & MND=0 TOTAL SORT 1,0

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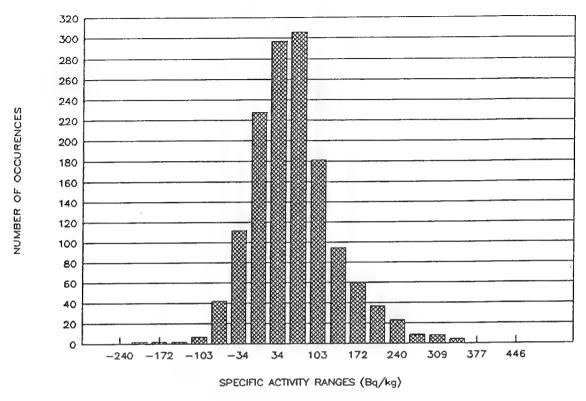
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	2-350 00	2-SEC RECORD	S HIIH S	OPTS		640 (ACT P	>0 kBa)			5:51:54
		2-SEC RECORD			TN >1 DE	_				5:52:54
			DETECTO		134	86.5%				5:53:34
			DETECTO		19	12.3%				5:56:14
			DETECTO		1	0.6%				5:58:14
			DETECTO		1	0.6%				5:59:14
			DETECTO		0	0.0%				5:59:34
			DETECTO		0	0.0%				6:03:34
			DETECTO		0	0.0%				6:10:54
			OTAL		•	155				6:12:14
		NET 2-SEC RE		TH SORTS		485				6:19:14
		2-SEC PERIOD				13,575				6:20:34
		AVG TIME BET				58.0 sec				ore
		Are the ber	acen e o			•				
1-GATE	SORTS	302	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQX	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	19	6.3%	-14000	0	-240		4000	19	3.0%	4
2	35	11.6%	-12000	2	-206		8000	240	37.5%	8
3	47	15.6%	-10000	2	-172		12000	98	15.3%	12
4	53	17.5%	-8000	2	-137		16000	58	9.1%	16
5	63	20.9%	-6000	7	-103	;	20000	34	5.3%	20
6	41	13.6%	-4000	42	-69		24000	40	6.3%	24
7	37	12.3%	-2000	112	-34	;	28000	17	2.7%	28
8	7	2.3%	0	227	0		32000	19	3.0%	32
TOTAL	302		2000	297	34		36000	17	2.7%	36
			4000	306	69	•	40000	14	2.2%	40
2-GATE	SORTS	338	6000	181	103	•	44000	5	0.8%	44
DETECTR	SORTS	FREQ%	8000	94	137	4	48000	9	1.4%	48
8			10000	60	172	4	52000	5	0.8%	52
9	25	7.4%	12000	37	206		56000	5	0.8%	56
10	32	9.5%	14000	23	240		50000	10	1.6%	60
11	37	10.9%	16000	9	274		54000	4	0.6%	64
12	62	18.3%	18000	H	309		68000	7	1.1%	68
13	122	36.1%	20000	4	343		72000	4	0.6%	72
14	43	12.7%	22000	0	377		76000	6	0.9%	76
15	17	5.0%	24000	0	412		30000	3	0.5%	80
TOTAL	338		26000	0	446		34000	2	0.3%	84
			>28000	0	0		34000	24	3.8%	>84
			TOTAL	1413		1	OTAL	640		
SUMMARY		ALE ELECTE	/00		CORTO OF	DUE CATE OFF	,	702		
		CLE EVENTS	680			ONE GATE ONLY	ſ	302		
		ICLE EVENTS	238		20K12 BI	TWO GATES		338		
	DISTRIBUT	ED EVENTS	153							

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

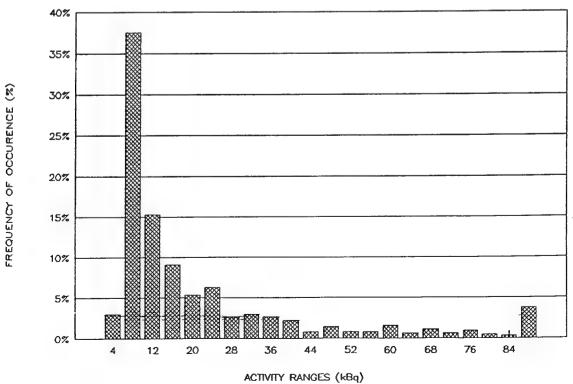
2.00 Empty belt

SORTER 2 LOG DATA FOR 16-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 16-Jul-93



SORTE	R 1 19-Jul-93										
AVERA	GE BACKGROUND COUNT RA	ATE		0.74	±	0.05 c/	'sec				
SORTE	R SOIL DENSITY			1.3 to	ons/m³	;					
GROUN	D SOIL DENSITY			1.65 to	ons/m³	1					
						CO	MATM	INATED	CLEAN		
MASS	TOTAL						0.56	tons	66.3	tons	
	MAXIMUM/SORT						61.1	kg	58.2	kg	
	MINIMUM/SORT						0.7	kg	52.4	kg	
UEICU	T RECOVERY OR VOLUME F	PECOVERY									99.2%
	ALENT SOIL-IN-GROUND	COOVERT					0.44	vd³	52.6	yd ³	53.0 yd3/day
EGOIA	WEEK! 2015-14-8KOOUD						••••	,-		•	•
PARTI	CLE ACTIVITY (MAXIMUM	ESTIMATE)									
	TOTAL					6	,544	k8q			
	MAXIMUM/SORT						•	kBq			
	MINIMUM/SORT							kBq			
	ELETION SORT						,				
DISPF	RSED + PARTICLE (REAL)	ISTIC ESTIMATE) ACTIVI	TY		2	,285	kBq	5,750	kBq	
	MAXIMUM/SORT						141	kBq	19	kBq	
	MINIMUM/SORT						0	Bq	-4	kBq	
	SPECIFIC ACTIVITY					4	,086	Bq/kg	87	Bq/kg	
WORK	HISTORY										
	WORK DAY START	05:00	MA 0			WO	RK D	AY END	03:30 PM		
	PLANT START-UP	05:00	MA 0			PL	ANT :	SKUT-DOWN	03:30 PM		
	START SOIL PROCESSIN	IG 05:53	3 AM			EN	D SO	IL PROCESSING	03:16 PM		
	LUNCH START	11:30	MA 0			LU	NCH I	PER100	0.5	hr	
	HODE HOUSE							10.0 hr			
	WORK HOURS	IOUDE						10.0 hr			
	AVAILABLE I	CESS HOURS (to	tol 20-c	00 500	ande 1			6.38 hr			
	DOWN-TIME	ess nooks (to	tat EU-S	1	Ji us j			3.62 hr			
	TOTAL SYSTE	M DAIICE						3.03 hr			
	NONAVAILABL							0.0 hr			
	START-UP	.E 1100K3						0.89 hr			
	SHUT-DOWN							0.22 hr			
	PLANT PERFO	DMANCE						63.8%			
	PRODUCTIVIT							63.8%			
			20					1 (00			
	SOIL PROCESSING RECOR							1,499			
NONPR	OCESS RECORDS (Test, o		(C)			4	1/0	5			
	20-SEC PROCESS RECOR	พร				1	,149				
	TOTAL SORT							MD>0 & MND=0	WHD>0		
	NO SORT							AD=0 & MD=0 &		UDma =	
	SOME SORT							AD>0&0 <md<mnd< td=""><td>MEXAMINU (MI</td><td>Xeiliun</td><td></td></md<mnd<>	MEXAMINU (MI	Xeiliun	
	UNEXPLAINED						0		100EVOL41		DALICE
	0 <ad<1kbq 8<="" td=""><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>UNEXPLAII</td><td>N 1</td><td>PAUSE</td></ad<1kbq>		1						UNEXPLAII	N 1	PAUSE
		AD=0 & MD	0						TIME		TIME
		AD<0 & MD	0						09:34:29		06:54
	ACT_P <5 kB	3q	62	17.7%					12:28:50		11:21

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2	פבר רמו	NT PERIODS				11,490					12:49
2.		NI PERIODS 2-SEC RECORD	C 111TH C	פדפר			(ACT_P >0 k	Ba)			
		2-SEC RECORD			1N >1 DE		(Not_i	-4,			
			DETECTO		84	. reoron	86.6%				
			DETECTO		12		12.4%				
			DETECTO		1		1.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
				(3	·	97	0.0%				
		י NET 2-SEC RE	CORDS UT	ru copte		253					
		NET Z-SEC RE 2-SEC PERIOD				11,237					
		Z-SEC PERIOD AVG TIME BET				90.8	sec				
	4	WAR LIWE REL	MCEM 6-91	30113		,0.0					
1-GATE SO	ORTS	177	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQX	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(8q/kg)		(Bq)	(#)		(k8q)	
								40	e 141	,	
1	4	2.3%	-14000	0	-241		4000		5.4%	4	
2	11	6.2%	-12000	0	-206	-	8000		41.4%	8	
3	26	14.7%	-10000	1	-172		12000		16.0%	12	
4	35	19.8%	-8000	0	-137		16000		7.7%	16	
5	44	24.9%	-6000	3	-103		20000		5.4%	20	
6	25	14.1%	-4000	2	-69		24000		4.9%	24	
7	25	14.1%	-2000	7	-34		28000		3.1%	28 32	
8	7	4.0%	0	48	0		32000		2.6%	36	
TOTAL	177		2000	142	34		36000		1.1%	40	
			4000	250	69		40000 44000		2.0%	44	
2-GATE SO		173	6000	291	103 137		48000		0.3%	48	
DETECTR	SORTS	FREQ%	8000	219	172		52000		1.7%	52	
8	_	2.00	10000	130			56000		0.6%	56	
9	5	2.9%	12000 14000	40 16	206 241		60000		0.3%	60	
10	22	12.7%		2	275		64000		0.3%	64	
11	28	16.2%	16000 18000	2	309		68000		1.1%	68	
12	43	24.9%	20000	1	344		72000		0.0%	72	
13	35 25		22000	0	378		76000		0.3%	76	
14 15	25 15	14.5% 8.7%	24000	0	412		80000		0.3%	80	
		0.7%	26000	0	447		84000		0.3%	84	
TOTAL	173		>28000	0	0		>84000		3.4%	>84	
			TOTAL	1154	•		TOTAL			- •	
SUMMARY 1	TOTALS		TOTAL	1134							
		CLE EVENTS	352		SORTS BY	ONE G	ATE ONLY	177			
		ICLE EVENTS	169		SORTS BY			173			
		ED EVENTS	245			_					

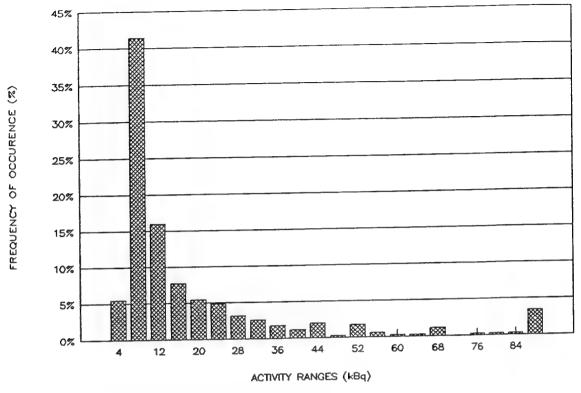
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

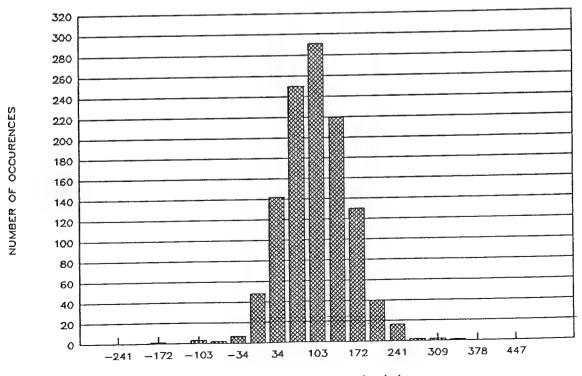
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 19-Jul-93



CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 19-Jul-93



- 40	07				
SORTER 2 19-Jul	-93				
AVERAGE BACKGROUND COUN	T RATE	-	.03 c/sec		
SORTER SOIL DENSITY		1.3 tons/m ³			
GROUND SOIL DENSITY		1.65 tons/m³		CLEAN	
			CONTAMINATED	CLEAN	
MASS TOTAL			0.50 tons	66.7 tor	is
MAXIMUM/SORT			61.3 kg	58.3 kg	
MINIMUM/SORT			0.7 kg	53.2 kg	
	WE DECOVERY				99.3%
WEIGHT RECOVERY OR VOLU			0.40 yd3	52.8 yd ³	53.2 yd1/day
EQUIVALENT SOIL-IN-GROU	ND		0.40 /2	•	
PARTICLE ACTIVITY (MAXI	MUM ESTIMATE)				
TOTAL			6,836 kBq		
MAXIMUM/SORT			556 kBq		
MINIMUM/SORT			3.0 kBq		
HINIHOUN SOLL					
DISPERSED + PARTICLE (R	EALISTIC ESTIMATE) ACT	IVITY	2,457 kBq	2,792 kBd	1
MAXIMUM/SORT			392 kBq	19 kBd	•
MINIMUM/SORT			-218 Bq	-7 kBd	1
SPECIFIC ACTIVIT	Y		4,927 Bq/kg	42 Bq/	'kg
WORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCE	SSING 05:53 AH		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOO	0.5 hr	
	V.10.0		10.0 hr		
WORK HO			10.0 hr		
	RE HOURS PROCESS HOURS (total 2	On-sec records)	6.40 hr		
		0-266 16601637	3.60 hr		
DOWN-TI			3.03 hr		
	YSTEM PAUSE LABLE HOURS		0.0 hr		
START-L			0.89 hr		
SHUT-DO			0.20 hr		
	PERFORMANCE		64.0%		
PRODUCT			64.0%		
TOTAL SOIL PROCESSING F		SEC)	1,489		
NONPROCESS RECORDS (Tes	t, calibration, etc)		2		
20-SEC PROCESS F	ECORDS		1,152		
TOTAL S	ORT		2 MD>0 & MND=0		
NO SORT			901 AD=0 & MD=0 3 249 AD>0&0 <md<mn< td=""><td></td><td>2 Y</td></md<mn<>		2 Y
SOME SO				MONIA CHURY PHIN	40
	AINED RECORDS		0	UNEXPLAIN	PAUSE
0 <ad<11< td=""><td>kBq & MD>0 0</td><td></td><td></td><td>TIME</td><td>TIME</td></ad<11<>	kBq & MD>0 0			TIME	TIME
	O OM & 0=GA			12:28:50	06:54
	AD<0 & MD 1				11:21
ACT P	<5 kBq 46	13.6%		14:38:11	,,,,,,

File SZJA0719.WR1

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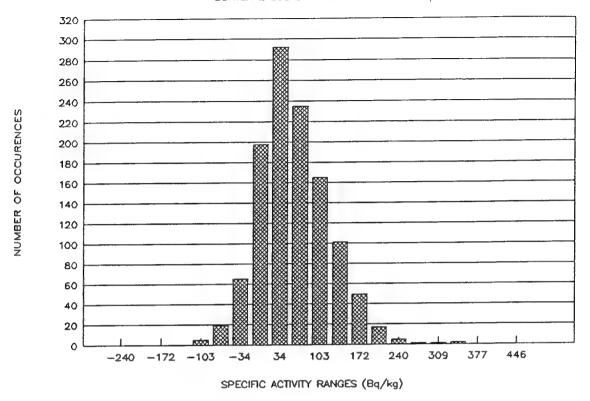
	2-SEC CO	UNT PERIODS				11,520					12:49
		2-SEC RECORI	S WITH S	ORTS			(ACT P >0	kBa)			
		2-SEC RECORE			IN >1 D		_				
			2 DETECTO		79		88.8%				
			3 DETECTO		10		11.2%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
		1	7 DETECTO	RS	0		0.0%				
		8	B DETECTO	RS	0		0.0%				
		1	TOTAL			89					
		NET 2-SEC RE	CORDS WI	TH SORTS		248					
		2-SEC PERIO	S WITH N	O SORTS		11,272					
		AVG TIME BET	WEEN 2-S	EC SORTS		92.9					
1-GATE	SORTS	173	ACT_ND	NUMBER	SPEC_A		ACT_	P SORT	FREQ%	ACT_P	
DETECT	R SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq			(kBq)	
3	10	5.8%	-14000	0	-240		400	0 15	4.5%	4	
2	31	17.9%	-12000	0	-206		800	0 147	43.6%	8	
3	28	16.2%	-10000	0	-172		1200	0 62	18.4%	12	
4	30	17.3%	-8000	0	-137		1600	0 31	9.2%	16	
5	31	17.9%	-6000	5	-103		2000	0 10	3.0%	20	
6	23	13.3%	-4000	19	-69		2400	0 11	3.3%	24	
7	18	10.4%	-2000	65	-34		2800	0 11	3.3%	28	
8	2	1.2%	0	197	0		3200	0 4	1.2%	32	
TOTAL	173		2000	292	34		3600	7	2.1%	36	
			4000	235	69		4000	3	0.9%	40	
2-GATE	SORTS	164	6000	165	103		4400	3	0.9%	44	
DETECT	R SORTS	FREQ%	8000	101	137		4800) 1	0.3%	48	
8			10000	49	172		5200	3	0.9%	52	
9	21	12.8%	12000	17	206		5600) 4	1.2%	56	
10			14000	5	240		6000) 2	0.6%	60	
11	27	16.5%	16000	1	274		6400	0	0.0%	64	
12		17.1%	18000	- 1	309		6800) 3	0.9%	68	
13	29	17.7%	20000	2	343		7200) 4	1.2%	72	
14	23	14.0%	22000	0	377		76000) 1	0.3%	76	
15	9	5.5%	24000	0	412		80000) 1	0.3%	80	
TOTAL	164		26000	0	446		84000		0.6%	84	
			>28000	0	0		>84000		3.6%	>84	
			TOTAL	1154			IATOT	. 337			
SUMMARY	Y TOTALS										
	HOT PARTI	CLE EVENTS	342		SORTS BY			173			
		ICLE EVENTS	174		SORTS BY	TWO GA	TES	164			
	DISTRIBUT	ED EVENTS	168								

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

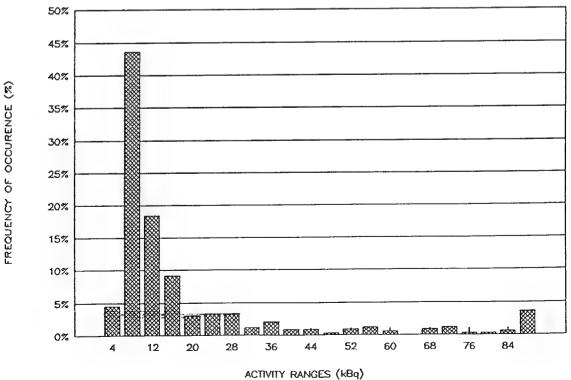
2.00 Empty belt

SORTER 2 LOG DATA FOR 19-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 19-Jul-93



		0.77 . 0	.04 c/sec		
AVERAGE BACKGROUND COUNT RATE		0.73 ± 0	.04 C/SeC		
SORTER SOIL DENSITY		1.65 tons/m ³			
GROUND SOIL DENSITY		1.05 (0115/111	CONTAMINATED	CLEAN	
MACC TOTAL			0.36 tons	80.2 tor	ns
MASS TOTAL			61.1 kg	58.2 kg	
MAXIMUM/SORT MINIMUM/SORT			0.7 kg	53.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	ERY				99.5%
EQUIVALENT SOIL-IN-GROUND			0.29 yd ³	63.6 yd³	63.9 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	MATE)				
TOTAL			7,012 kBq		
MAX1MUM/SORT			646 kBq		
MINIMUM/SORT			2.9 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIV	VITY	2,391 kBq	6,049 kBd	i
MAXIMUM/SORT			385 kBq	17 kBc	•
MINIMUM/SORT			0 Bq	-11 kBc	•
SPECIFIC ACTIVITY			6,576 Bq/kg	75 Bq/	kg
WORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:43 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS I	HOURS (total 20-	-sec records)	7.69 hr		
DOWN-TIME			2.31 hr		
TOTAL SYSTEM PAL			1.73 hr		
NONAVAILABLE HOU	JRS		0.0 hr		
START-UP			0.72 hr		
SHUT-DOWN			0.38 hr 76.9%		
PLANT PERFORMANO PRODUCTIVITY	JE .		76.9%		
TOTAL SOIL PROCESSING RECORDS (2	2-SEC and 20-SEC	3)	1,666		
NONPROCESS RECORDS (Test, calibr		-	3		
20-SEC PROCESS RECORDS			1,384		
TOTAL SORT			1 MD>0 & MND=0)	
NO SORT			1,177 AD=0 & MD=0	8 MND>0	
SOME SORT			206 AD>0&0 <md<m< td=""><td>IDmax&MND<mndma< td=""><td>x</td></mndma<></td></md<m<>	IDmax&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECO	ORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	_			UNEXPLAIN	PAUSE
AD=0				TIME	TIME
AD<0	& MD 0			08:06:43	06:24
ACT_P <5 kBq	51	18.1%		12:21:35	09:09

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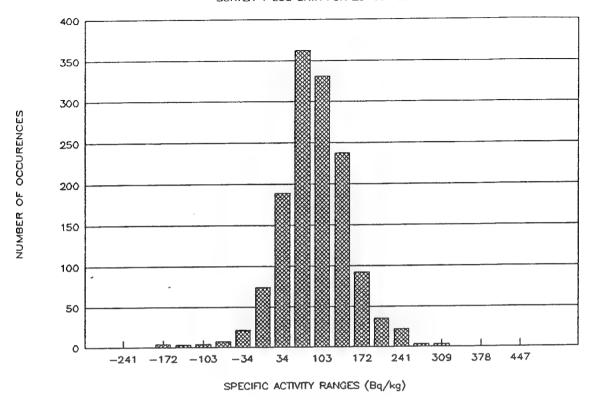
2	-CEC COUR	IT PERIODS				13,840						11:02
4		2-SEC RECORD	S HITH SO	DRTS		-	(ACT P	>0 kBq)				
		2-SEC RECORD			IN >1 DE		_					
	4		DETECTOR		63		88.7%					
			DETECTOR		8		11.3%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			OTAL			71						
		ET 2-SEC RE		TH SORTS		211						
		2-SEC PERIOD				13,629						
	-	AVG TIME BET				131.2						
	•	(VG TINE OCT	#CEN E 01									
1-GATE S	OPTS	139	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTA	30113	11/24	(04)		4-4/							
1	2	1.4%	-14000	0	-241			4000	12	4.3%	4	
2	8	5.8%	-12000	0	-206			8000	110	39.0%	8	
3	17	12.2%	-10000	4	-172			12000	47	16.7%	12	
4	24	17.3%	-8000	3	-137			16000	27	9.6%	16	
5	38	27.3%	-6000	4	-103			20000	19	6.7%	20	
6	22	15.8%	-4000	7	-69			24000	8	2.8%	24	
7	19	13.7%	-2000	21	-34			28000	7	2.5%	28	
8	9	6.5%	0	74	0			32000	8	2.8%	32	
TOTAL	139		2000	189	34			36000	6	2.1%	36	
(01112			4000	362	69			40000	3	1.1%	40	
2-GATE S	ORTS	143	6000	3 31	103			44000	7	2.5%	44	
DETECTR	SORTS	FREQ%	8000	237	137			48000	3	1.1%	48	
8			10000	92	172			52000	2	0.7%	52	
9	4	2.8%	12000	35	206			56000	4	1.4%	56	
10	9	6.3%	14000	22	241			60000	0	0.0%	60	
11	23	16.1%	16000	3	275			64000	2	0.7%	64	
12	38	26.6%	18000	3	309			68000	2	0.7%	68	
13	30	21.0%	20000	0	344			72000	1	0.4%	72	
14	22	15.4%	22000	0	378			76000	2	0.7%	76	
15	17	11.9%	24000	0	412			80000	0	0.0%	80	
TOTAL	143		26000	0	447			84000	0	0.0%	84	
,			>28000	0	0		>	84000	12	4.3%	>84	
			TOTAL	1387				TOTAL	282			
SUMMARY	TOTALS											
		CLE EVENTS	282		SORTS BY	ONE G	ATE ONL	.Υ	139			
		ICLE EVENTS	133		SORTS BY				143			
		ED EVENTS	83									
· ·												

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

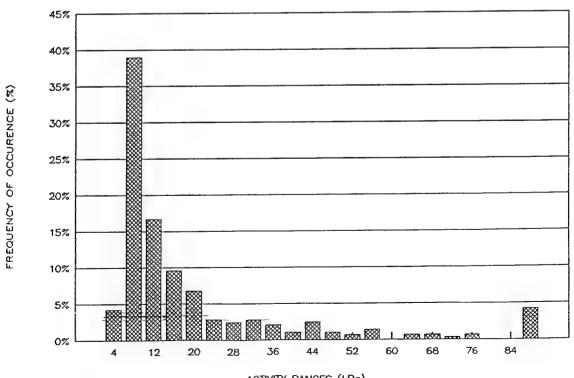
2.00 Empty belt

SORTER 1 LOG DATA FOR 20-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 20-Jul-93



AVERAGE BACKGROUND COUNT RATE ### 1.55 tons/m² GROUND SOIL DENSITY ### 1.65 tons/m² GROUND SOIL DENSITY ### 1.65 tons/m² CONTAMINATED CLEAN F.					
SORTER SOIL DENSITY 1.3 tons/m² GROUND SOIL DENSITY 1.65 tons/m² GROUND SECRET 1.65 tons/m² GROUND SOIL DENSITY 1.65 tons/m² GROUND	SORTER 2 20-Jul-93				
SARTER SOIL DENSITY	AVERAGE BACKGROUND COUNT RATE	0.79 ± 0	.03 c/sec		
TOTAL NAME		1.3 tons/m³			
MAXIMUM/SORT 0,40 tons 79.0 tons 7		1.65 tons/m³			
MAST TOTAL MAXIMINI/SORT MAXIMINI/SORT MAXIMINI/SORT METEGRY RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMINI/SORT MAXIMI			CONTAMINATED		
MAXIMUM/SORT (1.7 kg 53.2 kg 59.3 kg 59.4 kinimum/sort 501.4 kg 53.2 kg 59.4 kinimum/sort 7,655 kg 53.2 kg 99,4% 62.6 yd 63.0 yd day 62.6 yd 63.0	MASS TOTAL		0.49 tons		
MINIMUM/SORT METGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT MINIMUM			61.3 kg		
METICAL RECOVERY ON VOLUME RECOVERY 0.39 yd1 62.6 yd1 63.0 yd1/day	MINIMUM/SORT		0.7 kg	53.2 kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) 7,655 kBq		_			99.4%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY MORK DAY START MORK BOLE MORK HOURS MORK HOURS MORK HOURS ACTUAL PROCESSING MORK HOURS ACTUAL PROCESS HOURS (total 20-sec records) MORK DAY START-UP MORK HOURS ACTUAL PROCESS HOURS (total 20-sec records) MORK HOURS		ſ	U 20 Mg	62.6 vd3	63.0 yd3/day
TOTAL MAXIMUM/SORT HINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT HINIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MORK DAY START MOR	EQUIVALENT SOIL-IN-GROUND		0.37 ya	0000	
TOTAL MAXIMUM/SORT HINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT HINIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MORK DAY START MOR	PARTICIE ACTIVITY (MAXIMUM ESTIMA)	TE)			
MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT MORK MAXIMUM/SORT MORK MORK MAX MORK MAY MAN MAXIMUM MORK MAXIMUM/SORT MORK MORK MAXIMUM/SORT MORK MORK MAX MARIMUM/SORT MORK MORK MAX MARIMUM/SORT MORK MORK MAX			7,655 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY ACTIVITY ACTIVITY ACTIVITY BY ACTIVITY ACTIVATION ACTIVITY ACTIVITY ACTIVITY ACTIVITY ACTIVITY ACTIVIT			1,032 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT SPECIFIC ACTIVITY LORK HISTORY MORK DAY START PLANT START UP MORK DOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NOMAVAILABLE HOURS START-UP SHUT-DOWN PLANT START 10.0 hr 1.80 hr 1.80 hr 1.80 hr 1.80 hr 1.81 hr 1.81 hr 1.81 hr 1.81 hr 1.81 hr 1.82 hr 1.83 kr 1.84 hr 1.85 hr 1.86 hr 1.86 hr 1.87 hr 1.87 hr 1.88 hr 1.88 hr 1.89 hr 1.89 hr 1.89 hr 1.89 hr 1.89 hr 1.80 hr			3.3 kBq		
MAXIMUM/SORT SPECIFIC ACTIVITY WORK HISTORY MORK DAY START MORK DAY SHOD MOR DAY SHOD MORK DAY SHOD MORY DAY SHOD MORK DAY SHOD	WERTHON SOILS				
MAXIMUM/SORT	DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	2,659 kBq	•	
MINIMUM/SORT 14.33 Bq 1.17 kBq 2.9 Bq/kg 2.9			606 kBq	•	
SPECIFIC ACTIVITY WORK HISTORY WORK DAY START 05:00 AM MORK DAY END 03:30 PM PLANT START-UP 05:00 AM PLANT SHUT-DOWN 03:30 PM START SOIL PROCESSING 05:43 AM END SOIL PROCESSING 03:03 PM LUNCH START 11:30 AM LUNCH PERIOD 0.5 hr WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS TOTAL SOIT NO SORT SOME SORT UNEXPLAINED RECORDS 0-AD<0 & MD D 2 AD=0 & MD 1 AD<0 & MD 1 LUNCK DAY END 03:30 PM MORK DAY END 03:30 PM PLANT SHUT-DOWN 03:3	•		-1433 Bq	-17 kBq	
WORK DAY START 05:00 AM			5,375 Bq/kg	29 Bq/kg	1
WORK DAY START 05:00 AM					
PLANT START	WORK HISTORY			07.70 04	
START SOIL PROCESSING 05:43 AM END SOIL PROCESSING 03:03 PM	WORK DAY START	05:00 AM			
LUNCH START 11:30 AM LUNCH PERIOD 0.5 hr	PLANT START-UP	05:00 AM			
WORK HOURS	START SOIL PROCESSING	05:43 AM			
AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SORT NO SORT SOME SORT UMEXPLAINED RECORDS AD=0 & MD 1 AD<0 & MD 1 10.0 hr 7.58 hr 2.42 hr 1.80 hr 0.0 hr 0.14 hr 7.58 hr 2.42 hr 1.80 hr 0.72 hr 0.72 hr 0.72 hr 1.707 1.707 1.707 1.707 1.707 1.707 2.40 Do & MND=0 1.707 1.713 AD=0 & MD=0 VINEXPLAIN PAUSE TIME AD<0.2 MD 1	LUNCH START	11:30 AM	LUNCH PERIOD	0.5 111	
AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS 1,364 TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 2 AD=0 & MD 1 AD<0 & MD 1 D8:09:44 06:24 1056.24 1058.09:44 06:24 1058.09:44 106:24 1059.09</ad<1kbq>	HORE HOUSE		10.0 hr		
ACTUAL PROCESS HOURS (total 20-sec records) DOMN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0-AD-0 & MD 0 1 AD-0 & MD 1 AD-0 & MD 1 DESCRIPTION 2.42 hr 1.80 hr 0.0 hr 0.44 hr 75.8% 75.8% 75.8% 1,707 1,707 1,707 1,707 1,707 1,113 AD-0 & MND=0 1,364 2 MD>0 & MND=0 1,113 AD-0 & MD-0 & MND>0 20-SEC PROCESS RECORDS 0 UNEXPLAIN PAUSE TIME TIME 1,05(11/4) 1			10.0 hr		
DOWN-TIME		IPS (total 20-sec records)	7.58 hr		
TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 2 AD=0 & MD 1 AD<0 & MD 1 1.80 hr 0.00 hr 0.00 hr 0.04 hr 75.8% 75.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,707 13 2 MD>0 & MND=0 1,364 2 MD>0 & MND=0 1,113 AD=0 & MD=0 4 MD=0 & MD=0 UNEXPLAIN PAUSE TIME TIME TIME TIME 1.80 hr 0.00 hr 0.00</ad<1kbq>		5.00 (10121 20 002 1221	2.42 hr		
NONAVAILABLE HOURS 0.0 hr		F	1.80 hr		
START-UP 0.72 hr			0.0 hr		
SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 75.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,364 TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 2 AD=0 & MD 1 AD<0 & MD 1 AD 0 & MD 1 AD 0 & MD 1 AD 0 & MD 0 & MD</ad<1kbq>		-	0.72 hr		
PLANT PERFORMANCE PRODUCTIVITY 75.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 < AD<1 kBq & MD>0 2 AD=0 & MD 1 AD<0 & MD 1 AD 1			0.44 hr		
PRODUCTIVITY 75.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,707 NONPROCESS RECORDS 13 20-SEC PROCESS RECORDS 2 MD>0 & MND=0 NO SORT 2 MD>0 & MND=0 SOME SORT 249 AD>0&00 <md<mndmax&mnd<mndmax &="" 0="" 06:24="" 1="" 109:09<="" ad="0" ad<0="" md="" o8:09:44="" records="" td="" unexplained=""><td></td><td></td><td>75.8%</td><td></td><td></td></md<mndmax&mnd<mndmax>			75.8%		
NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0 AD < 0 & MD 1 13 1,364 2 MD > 0 & MND = 0 4 MD = 0 & MND > 0 249 AD > 0 & MD = 0 & MND > 0 UNEXPLAIN PAUSE TIME TIME TIME TIME TIME 108:09:44 06:24			75.8%		
NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0 AD < 0 & MD 1 13 1,364 2 MD > 0 & MND = 0 4 MD = 0 & MND > 0 249 AD > 0 & MD = 0 & MND > 0 UNEXPLAIN PAUSE TIME TIME TIME TIME TIME 108:09:44 06:24			4 707		
1,364 2 MD>0 & MND=0 2 MD=0 & MND>0 2 MD=0 & MND=0 MN					
TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0 AD = 0 & MD = 0 UNEXPLAIN UNEXPLAIN AD = 0 & MD = 0 UNEXPLAIN UNEXPLAIN AD = 0 & MD UNEXPLAIN AD = 0 & MD 1 AD < 0 & M	NONPROCESS RECORDS (Test, calibra	tion, etc)			
1,113 AD=0 & MD=0 & MND>0 SOME SORT UNEXPLAINED RECORDS 0 < AD<1 kBq & MD>0 AD=0 & MD 1 AD=0 & MD 1,113 AD=0 & MD=0 & MND>0 UNEXPLAIN PAUSE TIME TIME 1,113 AD=0 & MD>0 UNEXPLAIN PAUSE TIME TIME 1,113 AD=0 & MD>0 UNEXPLAIN PAUSE 1,113 AD=0 &	20-SEC PROCESS RECORDS		_		
SOME SORT UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0 AD = 0 & MD				2. พมก>ก	
UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0	NO SORT				
0 <ad<1kbq &="" md="">0 2 UNEXPLAIN PAUSE AD=0 & MD 1 TIME TIME AD<0 & MD 1 08:09:44 06:24</ad<1kbq>				NINGY BUILD AJUDINGY	
0 <ad<1kbq &="" md="">0</ad<1kbq>			U	IMEADI VIA	PAUSE
AD=0 & MD	·				
AD <u &="" 1<="" md="" td="" =""><td></td><td></td><td></td><td></td><td></td></u>					
ACT_P <5 kBq 42 12.2%					
	ACT_P <5 kBq	42 12.2%		10.27117	

File S2JA0720.WR1

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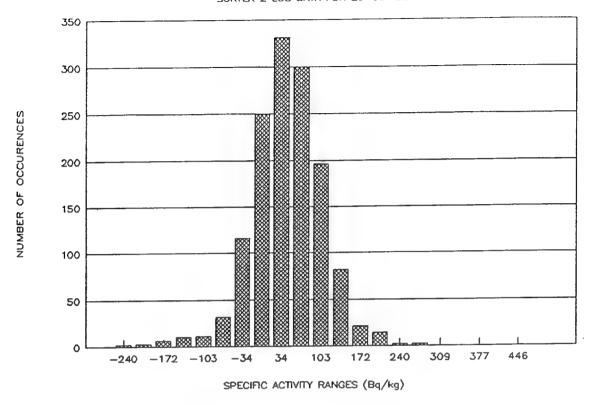
	2-SEC COL	JNT PERIODS				13,640				12	2:21:36	10:50
		2-SEC RECORD	S WITH S	ORTS		343	(ACT_P	>0 kBq)		14	4:10:56	10:54
		2-SEC RECORD			IN >1 DE	TECTOR						11:02
			DETECTO		80		83.3%					
			DETECTO		15		15.6%					
			DETECTO		1		1.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
		7	DETECTO	RS	0		0.0%					
	8 DETECTORS				0		0.0%					
	TOTAL					96)					
NET 2-SEC RECORDS WITH SO				TH SORTS		247	•					
		2-SEC PERIOD				13,393						
		AVG TIME BET				110.4						
1-GATE	SORTS	178	ACT ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECT		FREQ%	_ (Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
	12	6.7%	-14000	2	-240			4000	10	2.9%	4	
2		14.6%	-12000	3	-206			8000	140	40.8%	8	
3		11.8%	-10000	6	-172			12000	64	18.7%	12	
4		16.3%	-8000	10	-137			16000	38	11.1%	16	
5		21.9%	-6000	11	-103			20000	15	4.4%	20	
6		19.7%	-4000	31	-69			24000	14	4.1%	24	
7		7.3%	-2000	116	-34			28000	10	2.9%	28	
8		1.7%	0	249	0			32000	6	1.7%	32	
TOTAL			2000	331	34			36000	5	1.5%	36	
			4000	300	69			40000	2	0.6%	40	
2-GATE	SORTS	165	6000	197	103			44000	4	1.2%	44	
DETECT		FREQ%	8000	82	137			48000	3	0.9%	48	
8			10000	21	172			52000	4	1.2%	52	
9		12.1%	12000	14	206			56000	3	0.9%	56	
10	20	12.1%	14000	2	240			60000	4	1.2%	60	
11		12.1%	16000	2	274			64000	5	1.5%	64	
12		20.0%	18000	0	309			68000	3	0.9%	68	
13		24.2%	20000	0	343			72000	0	0.0%	72	
14		13.3%	22000	0	377			76000	0	0.0%	76	
15	10	6.1%	24000	0	412			80000	2	0.6%	80	
TOTAL	165		26000	0	446			84000	1	0.3%	84	
			>28000	0	0		>	84000	10	2.9%	>84	
			TOTAL	1377				TOTAL	343			
SUMMAR	Y TOTALS											
	HOT PART	ICLE EVENTS	332		SORTS BY	DNE G	ATE ONL	.Y	178			
	MULTIPAR	TICLE EVENTS	178		SORTS BY	TWO G	ATES		165			
	DISTRIBU	TED EVENTS	168									

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

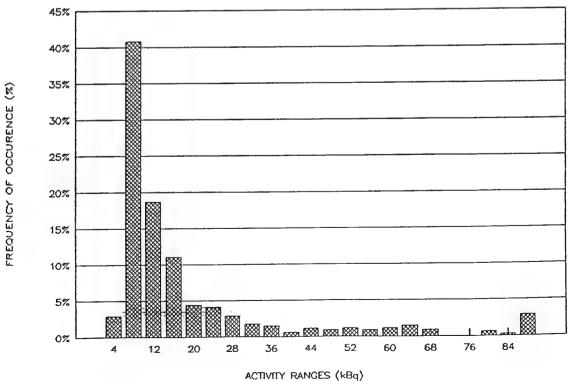
2.00 Empty belt

SORTER 2 LOG DATA FOR 20-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 20-Jul-93



		0.77	0.04		
VERAGE BACKGROUND COUNT F	MATE	0.72 1.3 to	1 0.04 c/sec		
CORTER SOIL DENSITY		1.65 to	•		
ROUND SOIL DENSITY		1.65 (0	CONTAMINATED	CLEAN	
70711			0.63 tons	83.7 t	ons
IASS TOTAL			61.1 kg	58.2 k	
MAXIMUM/SORT MINIMUM/SORT			0.7 kg	51.7 k	_
MINITHON SON					~
EIGHT RECOVERY OR VOLUME	RECOVERY				99.3%
EQUIVALENT SOIL-IN-GROUND			0.50 yd ³	66.4 y	rd' 66.9 yd'/day
PARTICLE ACTIVITY (MAXIMUM	ESTIMATE)				
TOTAL			15,098 kBq		
MAXIMUM/SORT			3,577 k8q		
MINIMUM/SORT			2.4 kBq		
			E 455 to	7 407 6	P.a.
ISPERSED + PARTICLE (REAL	ISTIC ESTIMATE) ACT	IVITY	5,152 kBq	3,603 k 21 k	·
MAXIMUM/SORT			2080 kBq	-7 k	•
MINIMUM/SORT			0 Bq		•
SPECIFIC ACTIVITY			8,213 8q/kg	43 8	d/ kg
ORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSI	NG 05:24 AM		END SOIL PROCESSING	03:04 PM	•
LUNCH START	11:30 AH		LUNCH PERIOD	0.5 h	Г
WORK HOURS			10.0 hr		
AVAILABLE			10.0 hr		
ACTUAL PRO	CESS HOURS (total 2	0-sec reco	ds) 8.05 hr		
DOWN-TIME			1.95 hr		
TOTAL SYST	EM PAUSE		1.60 hr		
NONAVAILAB	LE HOURS		0.0 hr		
START-UP			0.41 hr		
SKUT-DOWN			0.43 hr		
PLANT PERF	ORMANCE		80.5%		
PRODUCTIVI	TY		80.5%		
OTAL SOIL PROCESSING RECO	RDS (2-SEC and 20-S	EC)	2,011		
ONPROCESS RECORDS (Test,			13		
20-SEC PROCESS RECO			1,449		
TOTAL SORT			1 MD>0 & MND=0)	
NO SORT			1,112 AD=0 & MD=0	0<0nm &	
SOME SORT			336 AD>0&0 <md<mn< td=""><td>ONM>ONM&xamC</td><td>max</td></md<mn<>	ONM>ONM&xamC	max
UNEXPLAINE	D RECORDS		0		
0 <ad<1kbq< td=""><td></td><td></td><td></td><td>UNEXPLAIN</td><td>PAUSE</td></ad<1kbq<>				UNEXPLAIN	PAUSE
•	O			TIME	TIME
	AD<0 & MD 0			11:01:15	05:31
ACT P <5 k		19.8%			05:33

Printed on 07/28/93 at 01:33:35 PM

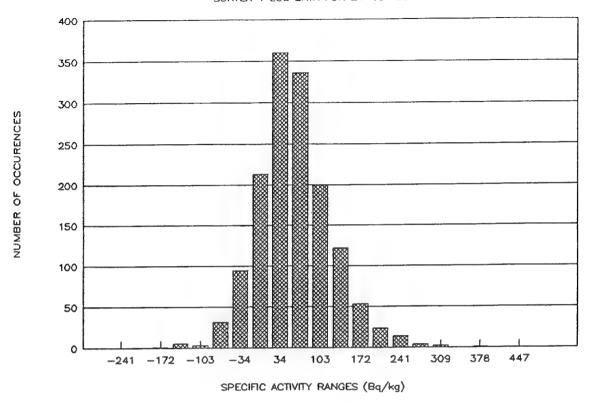
	2 000 001	NT PERIODS				14,490						11:
		2-SEC RECORD	e uttu e	פדפר				>0 kBq)				
		2-SEC RECORD			IN >1 DE		_					
	,		DETECTO		126		76.8%					
			DETECTO		31		18.9%					
			DETECTO		5		3.0%					
			DETECTO		2		1.2%					
			DETECTO		0		0.0%					
	7 DETECT				0		0.0%					
	8 DETECTORS						0.0%					
			OTAL		_	164						
		NET 2-SEC RE		TH SORTS		398						
		2-SEC PERIOD				14,092						
		AVG TIME BET				72.8						
Avg Time oc			WCCH C O									
1 6475	CODIC	291	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
1-GATE		FREQX	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTR	30113	- REWA	(04)	\	1-4-3-							
1	1	0.3%	-14000	0	-241			4000	30	5.3%	4	
2	15	5.2%	-12000	. 0	-206			8000	247	44.0%	8	
3	30	10.3%	-10000	1	-172			12000	106	18.9%	12	
4	54	18.6%	-8000	5	-137			16000	27	4.8%	16	
5	63	21.6%	-6000	3	-103			20000	32	5.7%	20	
6	50	17.2%	-4000	31	-69			24000	18	3.2%	24	
7	56	19.2%	-2000	94	-34			28000	16	2.8%	28	
8	22	7.6%	0	213	0			32000	8	1.4%	32	
TOTAL	291		2000	360	34			36000	13	2.3%	36	
TOTAL	271		4000	336	69			40000	9	1.6%	40	
2-GATE	SORTS	271	6000	200	103			44000	5	0.9%	44	
DETECT		FREQ%	8000	122	137			48000	4	0.7%	48	
8			10000	53	172			52000	9	1.6%	52	
9	6	2.2%	12000	23	206			56000	7	1.2%	56	
10	19	7.0%	14000	14	241			60000	3	0.5%	60	
11	44	16.2%	16000	4	275			64000	6		64	
12	48	17.7%	18000	2	309			68000	3		68	
13	61	22.5%	20000	0	344			72000	2		72	
14	50	18.5%	22000	1	378			76000	4		76	
15	43	15.9%	24000	0	412			80000	1		80	
TOTAL	271		26000	0	447			84000	0		84	
			>28000	0	0		:	>84000	12		>84	
			TOTAL	1462				TOTAL	562			
SUMMAR'	Y TOTALS											
	HOT PARTI	CLE EVENTS	536		SORTS BY			LY	291			
	MULTIPART	TICLE EVENTS	239		SORTS BY	TWO (GATES		271			
	DISTRIBUTED EVENTS											

REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

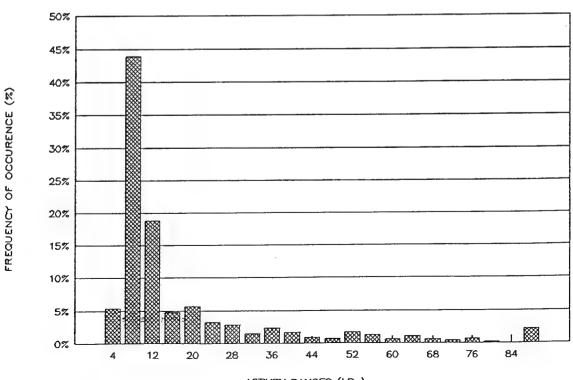
11:23

SORTER 1 LOG DATA FOR 21-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 21-Jul-93



ACTIVITY RANGES (kBq)

SORTER 2 21-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.78 ±	0.03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m	5		
GROUND SOIL DENSITY	1.65 tons/m	3		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.77 tons	83.3 ton	S
MAXIMUM/SORT		61.3 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	48.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY			99.1%
EQUIVALENT SOIL-IN-GROUND		0.61 yd³	66.0 yd ³	66.6 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)			
TOTAL		12,455 k8q		,
MAXIMUM/SORT		499 kBq		
MINIMUM/SORT		2.4 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	4,396 kBq	4,406 kBq	
MAXIMUM/SORT		230 kBq	19 kBq	
MINIMUM/SORT		-471 Bq	-12 kBq	
SPECIFIC ACTIVITY		5,743 Bq/kg	53 Bq/	kg .
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:24 AM	END SOIL PROCESSING	03:04 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS H	OURS (total 20-sec records)	8.01 hr		
DOWN-TIME		1.99 hr		
TOTAL SYSTEM PAU	SE	1.60 hr		
NONAVAILABLE HOU	RS	0.0 hr		
START-UP		0.42 hr		
SHUT-DOWN		0.43 hr		
PLANT PERFORMANC	E	80.1%		
PRODUCTIVITY		80.1%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,058		
NONPROCESS RECORDS (Test, calibr	ation, etc)	20		
20-SEC PROCESS RECORDS		1,442		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		1,080 AD=0 & MD=0 &		
SOME SORT		360 AD>0&0 <md<mn0< td=""><td>max&MND<mndmax< td=""><td>(</td></mndmax<></td></md<mn0<>	max&MND <mndmax< td=""><td>(</td></mndmax<>	(
UNEXPLAINED RECO		0		DAUCE
0 <ad<1kbq &="" md="">0</ad<1kbq>			UNEXPLAIN	PAUSE
AD=0			TIME	TIME
AD<0			05:33:16	05:31
ACT_P <5 kBq	119 19.3%		08:50:16	05:33

File SZJA0721.WR1

1

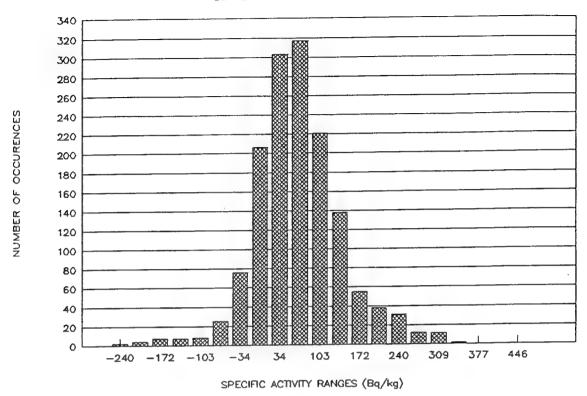
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	3-8EC CO	INT PERIODS				14,420				1	0:19:36	11:23
	2-366 606	2-SEC RECORD	אדוע פ	DRTS		•	(ACT P	>0 kBq)				
		2-SEC RECORD			IN >1 DE		` _	•-				
			DETECTO		141		81.5%					
			DETECTO		30		17.3%					
			DETECTO		2		1.2%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
	7 DETECTORS			0		0.0%						
			DETECTO		0		0.0%					
	TOTAL					173						
NET 2-SEC RECORDS WITH SORTS						443						
		2-SEC PERIOD				13,977						
		AVG TIME BET				65.1						
1-GATE	SORTS	316	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQX	ACT_P	
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
				_					20	/ 79	4	
3	18		-14000	2	-240			4000	29		8	
2	43	13.6%	-12000	4	-206			8000	265 97		12	
3	62	19.6%		7				12000	61	9.9%	16	
4	58	18.4%	-8000	7				16000 20000	37		20	
5	44	13.9%	-6000	8	-103			24000	24	3.9%	24	
6	51	16.1%	-4000	25 76	-69 -34			28000	9		28	
7	34	10.8%	-2000		0			32000	13	2.1%	32	
8	5 71/	1.9%	0 2000	206 303	34			36000	12		36	
TOTAL	316		4000	317	69			40000	9		40	
2-GATE	CORTC	300	6000	221	103			44000	9		44	
DETECT		FREQ%	8000	138	137			48000	3		48	
8	. 30113	IKCER	10000	55	172			52000	4		52	
9	33	11.0%	12000	38	206			56000	2	_	56	
10	43	14.3%	14000	31	240			60000	5	0.8%	60	
11	57	19.0%	16000	12	274			64000	3	0.5%	64	
12	55	18.3%	18000	11	309			68000	6	1.0%	68	
13	47	15.7%	20000	1	343			72000	0	0.0%	72	
14	49	16.3%	22000	0	377			76000	2	0.3%	76	
15	16	5.3%	24000	0	412			80000	1	0.2%	80	
TOTAL	300		26000	0	446			84000	1	0.2%	84	
			>28000	0	0		>	84000	24	3.9%	>84	
			TOTAL	1462				TOTAL	616			
SUMMARY	TOTALS											
	HOT PARTI	CLE EVENTS	603		SORTS BY			Y	316			
	MULTIPART	TICLE EVENTS	283		SORTS BY	TWO G	ATES		300			
	DISTRIBUT	TED EVENTS	164									

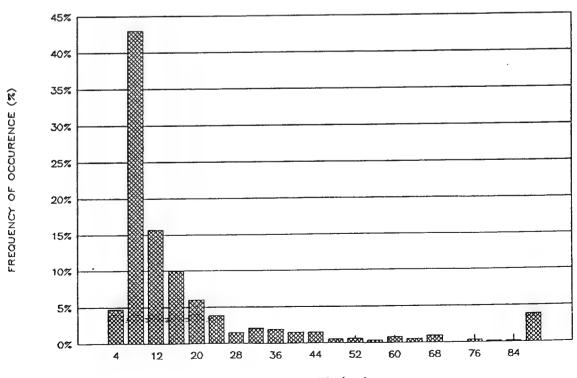
REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 21-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 21-Jul-93



ACTIVITY RANGES (kBq)

SORTER 1 22-Jul-93	•					
AVERAGE BACKGROUND COUNT R	ATE	0.72 ± 0	.04 c/sec			
SORTER SOIL DENSITY		1.3 tons/m³				
GROUND SOIL DENSITY		1.65 tons/m³				
			CONTAMINATED	CLEAN		
MASS TOTAL			0.28 tons	83.4 to	ns	
MAXIMUM/SORT			61.1 kg	58.2 kg		
MINIMUM/SORT			0.7 kg	52.4 kg		
WEIGHT RECOVERY OR VOLUME	RECOVERY				99.7%	
EQUIVALENT SOIL-IN-GROUND			0.22 yd3	66.1 yd	66.3 yd³/day	
PARTICLE ACTIVITY (MAXIMUM	ESTIMATE)					
TOTAL			8,768 k8q			
MAXIMUM/SORT			2,042 kBq			
MINIMUM/SORT			3.5 kBq			
DISPERSED + PARTICLE (REAL	ISTIC ESTIMATE) ACTIV	/ITY	2,840 kBq	1,754 kBd	7	
MAXIMUM/SORT			1285 kBq	14 kBd	₹	
MINIMUM/SORT			-2947 Bq	-7 kBd	1	
SPECIFIC ACTIVITY			10,052 8q/kg	21 Bq/	/kg	
WORK HISTORY						
WORK DAY START	05:00 AM		WORK DAY END	03:30 PM		
PLANT START-UP	05:00 AH		PLANT SHUT-DOWN	03:30 PM		
START SOIL PROCESSI			END SOIL PROCESSING			
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr		
Contra orani	11.30 741		CONON TENTOD	0.5		
WORK HOURS			10.0 hr			
AVAILABLE	HOURS		10.0 hr			
ACTUAL PRO	CESS HOURS (total 20-	sec records)	7.99 hr			
DOWN-TIME			2.01 hr			
TOTAL SYST	EM PAUSE		1.30 hr			
NONAVAILABI	LE HOURS		0.0 hr			
START-UP			0.73 hr			
SHUT-DOWN			0.45 hr			
PLANT PERFO	DRMANCE		79.9%			
PRODUCTIVIT	ſΥ		79.9%			
TOTAL SOIL PROCESSING RECOR	RDS (2-SEC and 20-SEC)	1,653			
NONPROCESS RECORDS (Test, o		•	13			
20-SEC PROCESS RECOR	·		1,438			
TOTAL SORT			1 MD>0 & MND=0			
NO SORT			1,285 AD=0 & MD=0 8	MND>0		
SOME SORT			151 AD>0&0 <md<mn0< td=""><td></td><td>x</td><td></td></md<mn0<>		x	
UNEXPLAINED	RECORDS		1			
0 <ad<1k8q 8<="" td=""><td>MD>0</td><td></td><td></td><td>UNEXPLAIN</td><td>PAUSE</td><td></td></ad<1k8q>	MD>0			UNEXPLAIN	PAUSE	
·	AD=0 & MD 0			TIME	TIME	
	AD<0 & MD 2			12:43:13	11:24	

File S1JA0722.WR1

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13:44:13 12:42

ACT_P <5 kBq 42 19.5%

COUNT PERIODS	14,380	
2-SEC RECORDS WITH SORTS	215	(ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	
2 DETECTORS	48	73.8%
3 DETECTORS	12	18.5%
4 DETECTORS	3	4.6%
5 DETECTORS	2	3.1%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	65	
NET 2-SEC RECORDS WITH SORTS	150	
2-SEC PERIODS WITH NO SORTS	14,230	
AVG TIME BETWEEN 2-SEC SORTS	191.7	sec

1-GATE S	SORTS	104	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQX	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	2	1.9%	-14000	3	-241	4000	8		4
2	6	5.8%	-12000	2	-206	8000	83	38.6%	8
3	11	10.6%	-10000	2	-172	12000	28		12
4	24	23.1%	-8000	1	-137	16000	16		16
5	25	24.0%	-6000	6	-103	20000	12		20
6	17	16.3%	-4000	37	-69	24000	10		24
7	16	15.4%	-2000	141	-34	28000	3		28
8	3	2.9%	0	312	0	32000	5		32
TOTAL	104		2000	385	34	36000	7		3 6
			4000	336	69	40000	2	0.9%	40
2-GATE	SORTS	111	6000	153	103	44000	3		44
DETECTR	SORTS	FREQ%	8000	57	137	48000	4	1.9%	48
8			10000	13	172	52000	2		52
9	3	2.7%	12000	2	206	56000	1	0.5%	56
10	11	9.9%	14000	1	241	60000	3		60
11	19	17.1%	16000	0	275	64000	5	2.3%	64
12	21	18.9%	18000	0	309	68000	4	1.9%	68
13	25	22.5%	20000	0	344	72000	0	0.0%	72
14	21	18.9%	22000	0	378	76000	3	1.4%	76
15	11	9.9%	24000	0	412	80000	1	0.5%	80
TOTAL	111		26000	0	447	84000	1	0.5%	84
			>28000	0	0	>84000	14	6.5%	>84
			TOTAL	1451		TOTAL	215		
SUMMARY	TOTALS								
		LE EVENTS	219		SORTS BY	ONE GATE ONLY	104		
		CLE EVENTS	84		SORTS BY	TWO GATES	111		
ĺ	DISTRIBUTE	D EVENTS	83						

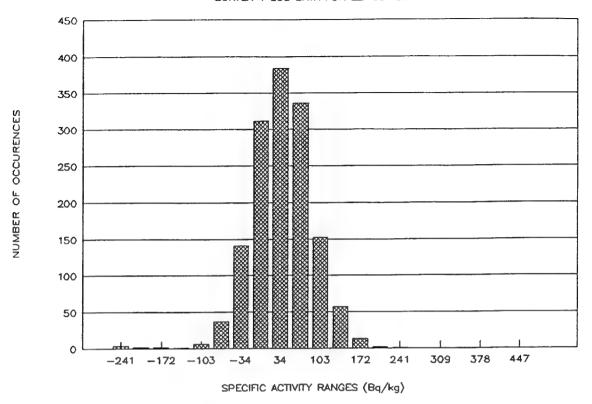
REC CODE EXPLANATION

2-SEC

1.00 Source check (Soil on belt)

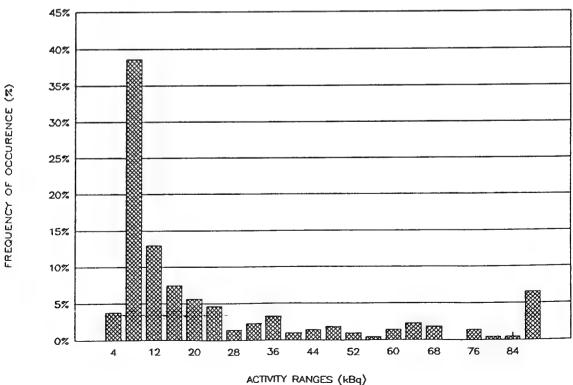
2.00 Empty belt

SORTER 1 LOG DATA FOR 22-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 22-Jul-93



SORTER 2 22-Jul-93				
SORTER 2 22-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0	.03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.23 tons	82.9 tons	
MAXIMUM/SORT		61.3 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	54.6 kg	
				99.7%
WEIGHT RECOVERY OR VOLUME RECOV	/EKY	0.19 yd³	65.7 yd³	65.9 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.17 yu	0311 / 0	, , ,
PARTICLE ACTIVITY (MAXIMUM EST	(MATE)			
TOTAL	THAT LY	4,139 kBq		
MAXIMUM/SORT		271 kBq		
MINIMUM/SORT		3.3 kBq		
HEREIGH GOVE		•		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	1,397 k8q	(3,253)kBq	
MAXIMUM/SORT		159 kBq	15 kBq	
MINIMUM/SORT		0 Bq	-12 kBq	
SPECIFIC ACTIVITY		5,965 Bq/kg	(39)Bq/kg	
WORK HISTORY		HOOK DAY END	03:30 PM	
WORK DAY START	05:00 AM	WORK DAY END PLANT SHUT-DOWN	03:30 PM	
PLANT START-UP	05:00 AM	END SOIL PROCESSING		
START SOIL PROCESSING	05:45 AM 11:30 AM	LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AH	COROLI I ENTO		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	S	10.0 hr		
ACTUAL PROCESS	HOURS (total 20-sec records)	7.92 hr		
DOWN-TIME		2.08 hr		
TOTAL SYSTEM PA	AUSE	1.30 hr		
NONAVAILABLE HO	DURS	0.0 hr		
START-UP		0.76 hr		
SHUT-DOWN		0.47 hr		
PLANT PERFORMA	NCE	79.2%		
PRODUCTIVITY		79.2%		
	(2-cec and 20-cec)	1,593		
TOTAL SOIL PROCESSING RECORDS		21		
NOMPROCESS RECORDS (Test, calil 20-SEC PROCESS RECORDS	bration, etc)	1,426		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		1,293 AD=0 & MD=0		
SOME SORT		132 AD>0&0 <md<mn< td=""><td>Dmax&MND<mndmax< td=""><td>•</td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td>•</td></mndmax<>	•
UNEXPLAINED RE	CORDS	0		
0 <ad<1kbq &="" md<="" td=""><td></td><td></td><td>UNEXPLAIN</td><td>PAUSE</td></ad<1kbq>			UNEXPLAIN	PAUSE
	0 & MD 0		TIME	TIME
	0 & MD 0		12:43:13	11:24
ACT_P <5 kBq	13 7.8%		14:16:53	12:42
<u>-</u> ·				

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	2-SEC CO	UNT PERIODS				14,260				
		2-SEC RECORD	S WITH S	ORTS		167	(ACT_P >0 kB	q)		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	ETECTOR				
		2	DETECTO	RS	45		90.0%			
		3	DETECTO	RS	4		8.0%			
		4	DETECTO	RS	1		2.0%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	O		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			50				
		NET 2-SEC RE	CORDS WI	TH SORTS		117				
		2-SEC PERIOD	S WITH N	O SORTS		14,143				
		AVG TIME BET	WEEN 2-S	EC SORTS		243.8	sec			
4 6475		00	ACT NO	WWOED	CDCC 4		ACT D	CODT	EDEO*	ACT D
1-GATE		88	ACT_ND		SPEC_A		ACT_P		FREQ%	ACT_P (kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(pg)	(#)		(keq)
1	5	5.7%	-14000	7	-240		4000	3	1.8%	4
2	11	12.5%	-12000	6	-206		8000	62	37.1%	8
3	17	19.3%	-10000	7	-172		12000	27	16.2%	12
4	17	19.3%	-8000	33	-137		16000	16	9.6%	16
5	22	25.0%	-6000	107	-103		20000	13	7.8%	20
6	10	11.4%	-4000	294	-69		24000	10	6.0%	24
7	6	6.8%	-2000	352	-34		28000	3	1.8%	28
8	0	0.0%	Ø	333	0		32000	1	0.6%	32
TOTAL	88		2000	190	34		36000	1	0.6%	36
			4000	78	69		40000	3	1.8%	40
2-GATE	SORTS	79	6000	25	103		44000	1	0.6%	44
DETECTR	SORTS	FREQ%	8000	9	137		48000	1	0.6%	48
8			10000	4	172		52000	2	1.2X	52
9	7	8.9%	12000	1	206		56000	5	3.0%	56
10	11	13.9%	14000	0	240		60000	1	0.6%	60
11	17	21.5%	16000	1	274		64000	4	2.4%	64
12	19	24.1%	18000	0	309		68000	4	2.4%	68

SUMMARY TOTALS

TOTAL

CI TOINES			
HOT PARTICLE EVENTS	155	SORTS BY ONE GATE ONLY	88
MULTIPARTICLE EVENTS	83	SORTS BY TWO GATES	79
DISTRIBUTED EVENTS	84		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

22.8%

6.3% 22000

2.5% 24000

>28000 TOTAL

- 2.00 Empty belt
- 3.00 Test (No process soil)

3 1.8%

0.0%

6 3.6%

0.0%

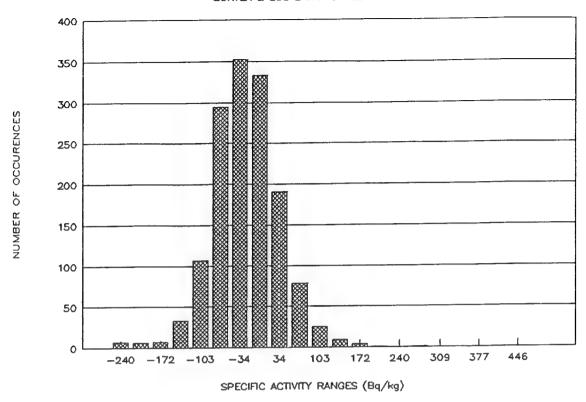
0.6%

>84000

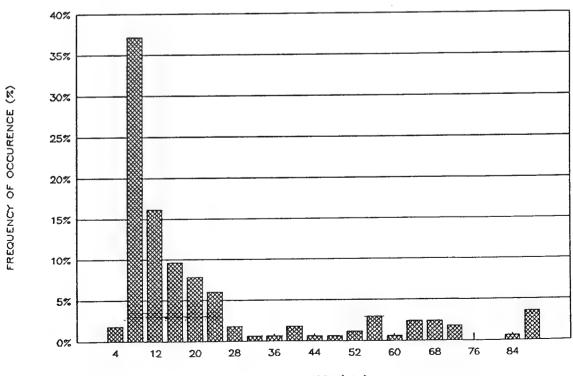
TOTAL

>84

SORTER 2 LOG DATA FOR 22-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 22-Jul-93



ACTIVITY RANGES (kBq)

SORTER 1	23-Jul-93							
AVERAGE BACK	GROUND COUNT RATE	0.7	75 ± 0.0	5 c/sec				
SORTER SOIL E	DENSITY	1.	.3 tons/m³					
GROUND SOIL D	DENSITY	1.6	55 tons/m³					
				CONTAMINATED	CLEAN			
MASS TOTAL				0.20 tons	78.3 t	ons		
MAXIM	JM/SORT			5.1 kg	58.2 k	g		
MINIMU	JM/SORT			0.7 kg	53.1 k	g		٠
WEIGHT RECOVE	ERY OR VOLUME RECOVE	RY				99.8%		
EQUIVALENT SO	DIL-IN-GROUND			0.15 yd ³	62.1 y	d ³ 62.2 y	/d³/day	á
PARTICLE ACTI		ATE)						
TOTAL				6,352 kBq				
MAXINU	M/SORT			1,134 kBq				
MINIMU	H/SORT			2.7 kBq				
DISPERSED + P	PARTICLE (REALISTIC E	ESTIMATE) ACTIVITY		1,946 kBq	1,237 k	Ba		
	M/SORT			637 k8q	12 k			
	M/SORT .			0 Bq	-9 k	•		
	TIC ACTIVITY			9,957 Bq/kg	16 B	· .		
WORK HISTORY								
WORK D	AY START	05:00 AM		WORK DAY END	03:30 PM			
PLANT	START-UP	05:00 AH		PLANT SHUT-DOWN	03:30 PM			
START	SOIL PROCESSING	05:28 AM		END SOIL PROCESSING	03:01 PM			
LUNCH	START	11:30 AM		LUNCH PERIOD	0.5 h	г		
	WORK HOURS			10.0 hr				
	AVAILABLE HOURS			10.0 hr				
	ACTUAL PROCESS HO	URS (total 20-sec i	records)	7.49 hr				
	DOWN-TIME			2.51 hr				
	TOTAL SYSTEM PAUS	E		1.99 hr				
	NONAVAILABLE HOUR	S		0.0 hr				
	START-UP			0.48 hr				
	SHUT-DOWN			0.48 hr				
	PLANT PERFORMANCE			74.9%				
	PRODUCTIVITY			74.9%				
TOTAL SOIL PRO	OCESSING RECORDS (2-	SEC and 20-SEC)		1,521				
	CORDS (Test, calibra	tion, etc)		20				
20-SEC	PROCESS RECORDS			1,349				
	TOTAL SORT			0=0MM & 0<0M 0				
	NO SORT			1,204 AD=0 & MD=0 &				
	SOME SORT			145 AD>0&0 <md<mnd< td=""><td>max&MND</td><td>ax</td><td></td><td></td></md<mnd<>	max&MND	ax		
	UNEXPLAINED RECOR			0				
	0 <ad<1kbq &="" md="">0</ad<1kbq>	0			UNEXPLAIN	PAUSE		
	& 0=0A				TIME	TIME		
	\$ 0>0A	MD 0	200		None	11:26		

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13:17

ACT_P <5 kBq 31 18.0%

13,490

	2-3EL LU	ONI PEKTOUS				13,470					
		2-SEC RECORD	S WITH S	ORTS		172	(ACT_P	>0 kBq)			
2-SEC RECORDS WI				OSITIVES	IN >1 DE	TECTOR					
2 DETECTOR				RS	37		82.2%				
	3 DETECTORS				8		17.8%				
4 DETECTORS				0		0.0%					
5 DETECTORS				0		0.0%					
6 DETECTORS				0		0.0%					
7 DETECTORS				0		0.0%					
8 DETECTORS				0		0.0%					
TOTAL					45						
NET 2-SEC RECORDS WITH SORTS					127						
2-SEC PERIODS WITH NO SORTS					13,363						
AVG TIME BETWEE				EC SORTS		212.4	sec				
1 0475	27002	81	ACT_ND	NI MRED	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE			(Pg)		(Bq/kg)		,	(Bq)	(#)		(kBq)
DETECT	K SUKIS	FKEWA	(PQ)	(#)	(64) (97)			(04)			44.
1	2	2.5%	-14000	1	-241			4000	9	5.2%	4
2			-12000	1	-206			8000	60	34.9%	8
3		12.3%	-10000	4	-172			12000	37	21.5%	12
4			-8000	6	-137			16000	15	8.7%	16
5			-6000	10	-103		;	20000	8	4.7%	20
6		19.8%	-4000	56	~69		;	24000	5	2.9%	24
7		19.8%	-2000	160	-34			28000	2	1.2%	28
8	3	3.7%	0	275	0			32000	6	3.5%	32
TOTAL	81		2000	380	34			36000	3	1.7%	36
			4000	275	69		•	40000	1	0.6%	40
2-GATE	SORTS	91	6000	137	103			44000	1	0.6%	44
DETECT	R SORTS	FREQ%	8000	47	137		•	48000	1	0.6%	48
8			10000	14	172			52000	0	0.0%	52
9	4	4.4%	12000	3	206		!	56000	2	1.2%	56
10	8	8.8%	14000	0	241			60000	2	1.2%	60
11	18	19.8%	16000	0	275			64000	0	0.0%	64
12	18	19.8%	18000	0	309			68000	4	2.3%	68
13	20	22.0%	20000	0	344			72000	3	1.7%	72
14	16	17.6%	22000	0	378			76000	0	0.0%	76
15	7	7.7%	24000	0	412		1	B0000	3	1.7%	80
TOTAL	91		26000	0	447		1	84000	0	0.0%	84
			>28000	0	0		>	84000	10	5.8%	>84
			TOTAL	1369				TOTAL	172		
SUMMAR	Y TOTALS										
HOT PARTICLE EVENTS			180		SORTS BY	ONE GA	TE ONL	Y	81		
MULTIPARTICLE EVENTS			88		SORTS BY	TWO GA	TES		91		
DISTRIBUTED EVENTS			0								

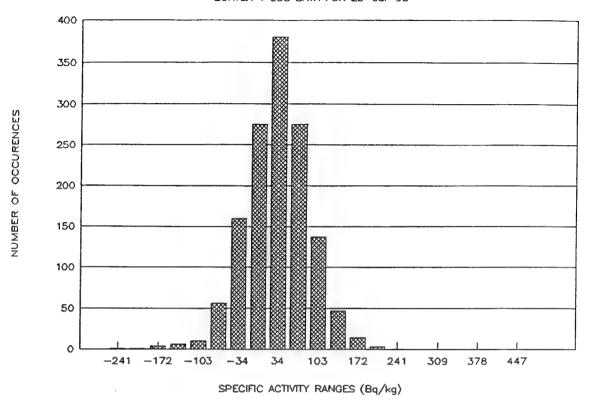
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

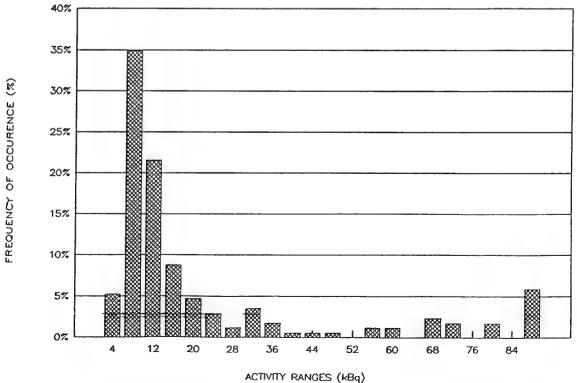
2-SEC COUNT PERIODS

SORTER 1 LOG DATA FOR 23-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 23-Jul-93



SORTER 2 23-Jul-93								
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0	0.03 c/sec						
SORTER SOIL DENSITY	1.3 tons/m³							
GROUND SOIL DENSITY	1.65 tons/m ³							
		CONTAMINATED	CLEAN					
MASS TOTAL		0.18 tons	74.4 tons	3				
MAXIMUM/SORT		5.1 kg	58.3 kg					
MINIMUM/SORT		0.7 kg	53.2 kg					
A VOLUME DECOME	nv.			99.8%				
WEIGHT RECOVERY OR VOLUME RECOVE	Kt	0.14 yd³	59.0 yd3	59.1 yd3/day				
EQUIVALENT SOIL-IN-GROUND		0.14 /0	,					
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)							
TOTAL		3,650 kBq						
MAXIMUM/SORT		540 kBq						
MINIMUM/SORT		3.3 kBq						
CITETION AND								
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	1,276 kBq	3,209 kBq					
MAXIMUM/SORT		329 kBq	20 kBq					
MINIMUM/SORT		0 Bq	-13 kBq					
SPECIFIC ACTIVITY		7,158 Bq/kg	43 Bq/	kg				
WORK HISTORY			07.70 04					
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM					
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM 03:01 PM					
START SOIL PROCESSING	05:28 AM	END SOIL PROCESSING	0.5 hr					
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 111					
WORK HOURS		10.0 hr						
AVAILABLE HOURS		10.0 hr						
	OURS (total 20-sec records)	7.11 hr						
DOWN-TIME	OOKS (10141 ES 500 1000 ES)	2.89 hr						
TOTAL SYSTEM PAU	SE	2.39 hr						
NONAVAILABLE HOU		0.0 hr						
START-UP		0.48 hr						
SHUT-DOWN		0.47 hr						
PLANT PERFORMANC	Ε	71.1%						
PRODUCTIVITY		71.1%						
			•					
TOTAL SOIL PROCESSING RECORDS (2		1,440						
NONPROCESS RECORDS (Test, calibr	ation, etc)	19						
20-SEC PROCESS RECORDS		1,279 0 MD>0 & MND=0						
TOTAL SORT			1,134 AD=0 & MO=0 & MND>0					
NO SORT		1,134 AD=0 & HO=0 1		×				
SOME SORT		145 AD20&04104111	emeral no thona					
UNEXPLAINED RECO		U	UNEXPLAIN	PAUSE				
0 <ad<1kbq &="" md="">0</ad<1kbq>			TIME	TIME				
AD=0			None	05:39				
AD<0				11:25				
ACT_P <5 kBq	19 11.8%							

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1

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	2-SEC CO	UNT PERIODS				12,790					13:17
		2-SEC RECORD	S WITH S	ORTS			(ACT P >0 kB	q)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DI	ETECTOR	_				
		2	PETECTO	RS	38		86.4%				
		3	DETECTO	RS	6		13.6%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			44					
		NET 2-SEC RE	CORDS WIT	TH SORTS		117					
		2-SEC PERIOD	S WITH NO	SORTS		12,673					
		AVG TIME BET	WEEN 2-SE	EC SORTS		218.6	sec				
1-GATE	SORTS	80	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P	
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)	
1		3.8%	-14000	1	-240		4000	6	3.7%	4	
2		13.8%	-12000	3	-206		8000	59	36.6%	8	
3		21.3%		2	-172		12000	31	19.3%	12	
4	18	22.5%	-8000	8	-137		16000	15	9.3%	16	
5	8	10.0%	-6000	8	-103		20000	10	6.2%	20	
6		13.8%	-4000	22	-69		24000	5	3.1%	24	
7		12.5%	-2000	71	-34		28000	2	1.2%	28	
8	2	2.5%	0	168	0		32000	7	4.3%	32	
TOTAL	80		2000	292	34		36000	5	3.1%	36	
		•	4000	325	69		40000	2	1.2%	40	
2-GATE		81	6000	247	103		44000	2	1.2%	44	
DETECT	R SORTS	FREQ%	8000	97	137		48000	3	1.9%	48	
8		=	10000	31	172		52000	0	0.0%	52	
9	6	7.4%	12000	13	206		56000	0	0.0%	56	
10	10	12.3%	14000	4	240		60000	1	0.6%	60 64	
11	19	23.5%	16000	3	274		64000	4	2.5%	68	
12	16	19.8%	18000	2	309 343		68000 72000	1	0.6% 1.9%	72	
13	11	13.6%	20000	0	377		76000	1		76	
14		14.8%	22000				80000			80	
15	7	8.6%	24000	0	412 446		84000	1	0.0%	84	
TOTAL	81		26000 >28000	0	446		>84000	3	1.9%	>84	
			TOTAL	1298	U		TOTAL	161	1.74	704	
SUMMARI	TOTALS		TOTAL	1270			TOTAL	101			
		CLE EVENTS	164		SORTS BY	ONE GA	TE ONLY	80			
		ICLE EVENTS	81		SORTS BY			81			
		ED EVENTS	0								

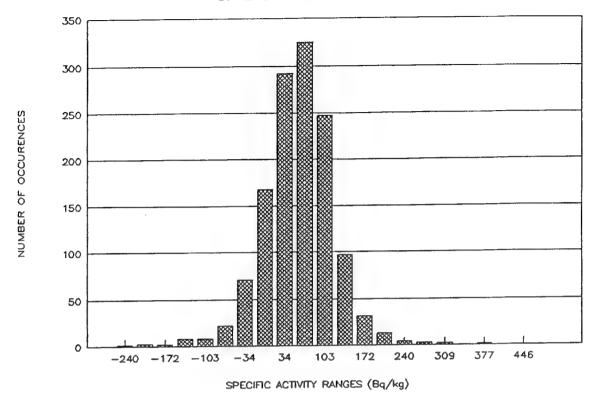
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 23-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 23-Jul-93

40%
35%
30%
25%
20%
20%
15%
10%
5%
4 12 20 28 36 44 52 60 68 76 84

ACTIVITY RANGES (kBq)

SORTER 1 24-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.73 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/	m³		
GROUND SOIL DENSITY	1.65 tons/	m³		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.12 tons	61.0 tor	ns
MAXIMUM/SORT		2.9 kg	58.2 kg	
MINIMUM/SORT		0.7 kg	55.3 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY			99.8%
EQUIVALENT SOIL-IN-GROUND		0.10 yd3	48.4 yd ⁵	48.5 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	IATE)			
TOTAL		2,566 kBq		
MAXIMUM/SORT		279 kBq		
MINIMUM/SORT		3.1 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	827 kBq	1,985 kBq	I
MAXIMUM/SORT		180 kBq	17 kBq	I
MINIMUM/SORT		p8 0	-11 kBq	l
SPECIFIC ACTIVITY		6,783 Bq/kg	33 Bq/	kg
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	03:30 PH	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	12:15 PH	
START SOIL PROCESSING	05:53 AM	END SOIL PROCESSING	11:46 AM	
LUNCH START	12:30 PM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		7.2 hr		
ACTUAL PROCESS H	OURS (total 20-sec records) 5.84 hr		
DOWN-TIME		1.41 hr		
TOTAL SYSTEM PAU	SE	0.00 hr		
NONAVATLABLE HOU	RS	2.8 hr		
START-UP		0.90 hr		
SHUT-DOWN		0.48 hr		
PLANT PERFORMANC	E	80.5%		
PRODUCTIVITY		58.4%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	1,172		
NONPROCESS RECORDS (Test, calibr	ation, etc)	14		
20-SEC PROCESS RECORDS		1,051		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		954 AD=0 & MD=0 8		
SOME SORT		97 AD>080 <hd<hn0< td=""><td>max&MND<mndma.< td=""><td>x .</td></mndma.<></td></hd<hn0<>	max&MND <mndma.< td=""><td>x .</td></mndma.<>	x .
UNEXPLAINED RECO	RDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>			UNEXPLAIN	PAUSE
AD=0			TIME	TIME
AD<0	& MO 0		None	None
	24 42 44			

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ACT_P <5 kBq

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21 17.4%

2-	-SEC CO	UNT PERIODS				10,510					
		2-SEC RECORD	S WITH SO	ORTS		121	(ACT_P	>0 kBq)			
		2-SEC RECORD			IN >1 DE	ETECTOR					
			DETECTO		28		84.8%				
		3	DETECTO	RS	4		12.1%				
		4	DETECTOR	RS	1		3.0%				
		5	DETECTOR	RS	0		0.0%				
		6	DETECTOR	rs.	0		0.0%				
		7	DETECTOR	RS	0		0.0%				
		8	DETECTOR	R\$	Ü		0.0%				
		Т	OTAL			33					
		NET 2-SEC RE	CORDS WIT	TH SORTS		88					
		2-SEC PERIOD	S WITH NO	SORTS		10,422					
		AVG TIME BET	WEEN 2-SE	EC SORTS		238.9	sec				
1-GATE SO	ייים	63	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTION	001110	,,,,	4-40	•				·			
1	0	0.0%	-14000	0	-241			4000	5	4.1%	4
2	3	4.8%	-12000	0	-206			8000	52	43.0%	В
3	7	11.1%	-10000	3	-172			12000	23	19.0%	12
4	11	17.5%	-8000	6	-137			16000	12	9.9%	16
5	13	20.6%	-6000	3	-103			20000	4	3.3%	20
6	12	.19.0%	-4000	16	-69			24000	0	0.0%	24
7	13	20.6%	-2000	68	-34			28000	6	5.0%	28
8	4	6.3%	0	191	0			32000	2	1.7%	32
TOTAL	63		2000	272	34			36000	1	0.8%	36
			4000	277	69			40000	0	0.0%	40
2-GATE SO	ORTS	58	6000	141	103			44000	1	0.8%	44
DETECTR	SORTS	FREQ%	8000	69	137			48000	0	0.0%	48
8			10000	13	172			52000	1	0.8%	52
9	1	1.7%	12000	3	206			56000	0	0.0%	56
10	6	10.3%	14000	3	241			60000	4	3.3%	60
11	8	13.8%	16000	0	275			64000	1	0.8%	64
12	14	24.1%	18000	1	309			68000	3	2.5%	68
13	12	20.7%	20000	0	344			72000	0	0.0%	72
14	8	13.8%	22000	0	378			76000	1	0.8%	76
15	9	15.5%	24000	0	412			80000	0	0.0%	80
TOTAL	58		26000	0	447			84000	0	0.0%	84
			>28000	0	0			84000	S	4.1%	>84
			TOTAL	1066				TOTAL	121		
SUMMARY 1	TOTALS							.	47		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

HOT PARTICLE EVENTS 115 SORTS BY ONE GATE ONLY

2.00 Empty belt

DISTRIBUTED EVENTS

3.00 Test (No process soil)

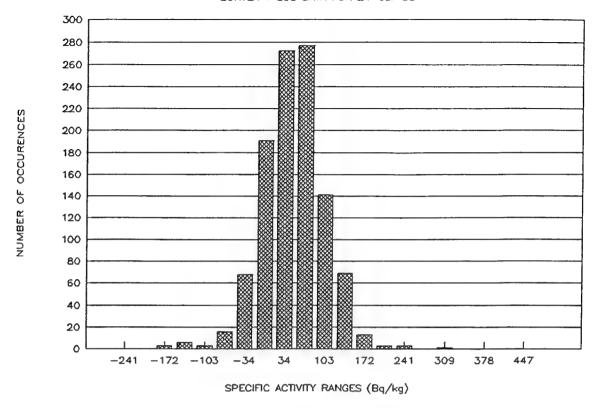
MULTIPARTICLE EVENTS 52

63

58

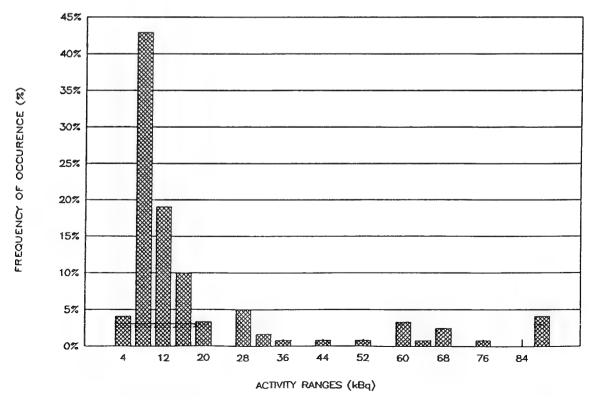
SORTS BY TWO GATES

SORTER 1 LOG DATA FOR 24-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 24-Jul-93



2/ 1/ 07						
SORTER 2 24-Jul-93						
AVERAGE BACKGROUND COUNT RATE		0.80	± 0.03 c	/sec		
SORTER SOIL DENSITY		1.3 tons	s/m³			
GROUND SOIL DENSITY		1.65 tons	s/m³			
			CC	ONTAMINATED	CLEAN	
MASS TOTAL				0.21 tons	55.3 tons	5
MAXIMUM/SORT				58.3 kg	58.3 kg	
MINIMUM/SORT				0.7 kg	55.3 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY						99.6%
EQUIVALENT SOIL-IN-GROUND				0.17 yd3	43.9 yd3	44.0 yd3/day
				•	•	
PARTICLE ACTIVITY (MAXINUM ESTIMATE)					
TOTAL			1	1,572 kBq		
MAXIMUM/SORT				80 kBq		
MINIMUM/SORT				3.0 kBq		
				`		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIV	'ITY		670 kBq	(638)kBq	
MAXIMUM/SORT '				48 kBq	10 kBq	
MINIMUM/SORT				0 Bq	-14 kBq	
SPECIFIC ACTIVITY			3	,191 Bq/kg	(12)Bq/k	g
WORK HISTORY						
WORK DAY START	05:00 AM		wo	ORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM		PL	ANT SHUT-DOWN	12:15 PM	
START SOIL PROCESSING	05:54 AM		EN	D SOIL PROCESSING	11:47 AM	
LUNCH START	12:30 PM		LU	INCH PERIOO	0.5 hr	
WORK HOURS				10.0 hr		
AVAILABLE HOURS				7.2 hr		
ACTUAL PROCESS HOUR	S (total 20-	sec record	ds)	5.29 hr		
DOWN-TIME			•	1.96 hr		
TOTAL SYSTEM PAUSE				0.61 hr		
NONAVAILABLE HOURS				2.8 hr		
START-UP				0.90 hr		
SHUT-DOWN				0.46 hr		
PLANT PERFORMANCE				73.0%		
PRODUCTIVITY				52.9%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)		1,033		
NONPROCESS RECORDS (Test, calibration				6		
20-SEC PROCESS RECORDS				953		
TOTAL SORT				2 MD>0 & MND=0		
NO SORT				867 AD=0 & MD=0 &	MND>0	
SOME SORT				84 AD>0&0 <md<mn0< td=""><td>max&MND<mndmax< td=""><td></td></mndmax<></td></md<mn0<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS				0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1				UNEXPLAIN	PAUSE
AD=0 & MI	0				TIME	TIME
AD<0 & MI	0				10:57:54	06:15
ACT_P <5 kBq	9	11.3%			•	06:35

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	2-SEC CO	JNT PERIODS				9,530						07:26
		2-SEC RECORD	S WITH S	DRTS			(ACT_F	>0 kBq)				08:12
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR	_					
		2	DETECTO	RS	20		74.1%					
		3	DETECTO	RS	6		22.2%					
		4	DETECTO	RS	1		3.7%					
		5	DETECTO	RS	0		0.0%					
		6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		τ	OTAL			27						
		NET 2-SEC RE	CORDS WI	TH SORTS		53						
		2-SEC PERIOD	S WITH NO	SORTS		9,477						
		AVG TIME BET	WEEN 2-SI	EC SORTS		359.6	sec					
1-GATE	SORTS	44	ACT_ND		SPEC_A			ACT_P		FREQ%	ACT_P	
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(pg)	(#)		(kBq)	
1	o	0.0%	-14000	0	-240			4000	3	3.8%	4	
2	9	20.5%	-12000	8				8000	29	36.3%	8	
3	8		-10000	4	-172			12000	13	16.3%	12	
4	7	15.9%	-8000	7	-137			16000	6	7.5%	16	
5	7	15.9%	-6000	20	-103			20000	6	7.5%	20	
6	6	13.6%	-4000	75	-69			24000	2	2.5%	24	
7	6	13.6%	-2000	196	-34			28000	2	2.5%	28	
В	1	2.3%	0	254	0			32000	3	3.8%	32	
TOTAL	44		2000	216	34			36000	2	2.5%	36	
			4000	125	69			40000	1	1.3%	40	
2-GATE	SORTS	36	6000	42	103			44000	1	1.3%	44	
DETECT	R SORTS	FREQX	8000	10	137			48000	- 1	1.3%	48	
8			10000		172			52000	1	1.3%	52	
9	3	8.3%	12000	1	206			56000	3	3.8%	56	
10	7	19.4%	14000	0	240			60000	2	2.5%	60	
11	5	13.9%	16000	0	274			64000	1	1.3%	64	
12	8	22.2%	18000	0	309			68000	1	1.3%	88	
13	7	19.4%	20000	0	343			72000	0	0.0%	72	
14	5	13.9%	22000	0	377			76000	2	2.5%	76	
15	1	2.8%	24000	0	412			80000	0	0.0%	80	
JATOT	36		26000	0	446			84000	1	1.3%	84	
			>28000	0	0		>	84000	0	0.0%	>84	
			TOTAL	959				TOTAL	80			
SUMMAR	Y TOTALS											
	HOT PART	ICLE EVENTS	7 7		SORTS BY	ONE G	ATE ONL	.Y	44			
	MULTIPAR	TICLE EVENTS	55		SORTS BY	TWO G	ATES		36			
	DISTRIBUT	TED EVENTS	157									

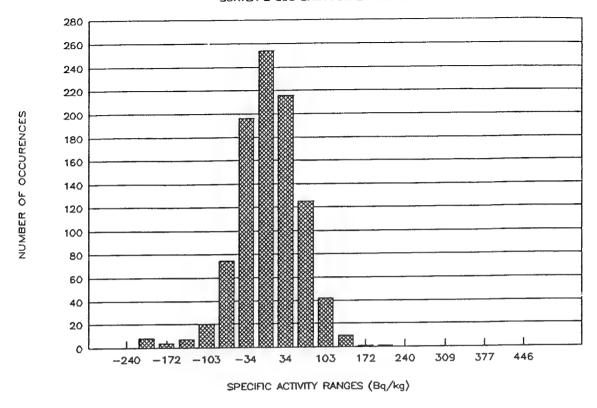
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 24-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 24-Jul-93

40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 84 52 60 68 44 12 20 28 36 ACTIVITY RANGES (kBq)

SORTER 1 26-Jul-93					
AVERAGE BACKGROUND COUNT RATE	0.72 ± 0	.04 c/sec			
SORTER SOIL DENSITY	1.3 tons/m ³	•			
GROUND SOIL DENSITY	1.65 tons/m ³				
		CONTAMINATED	CLEAN		
MASS TOTAL		0.23 tons	90.2 ton	as	
MAXIMUM/SORT		4.4 kg	58.2 kg		
HINIHUM/SORT		0.7 kg	53.9 kg		
WEIGHT RECOVERY OR VOLUME RECO	VERY			99.8%	
EQUIVALENT SOIL-IN-GROUND		0.18 yd ³	71.5 yd³	71.7 yd3/day	
PARTICLE ACTIVITY (MAXIMUM EST	INATE)				
TOTAL		4,150 kBq			
MAXIMUM/SORT		312 k8q			
MINIMUM/SORT		3.5 kBq			
DISPERSED + PARTICLE (REALISTI	C ESTIMATE) ACTIVITY	1,450 k8q	3,136 kBq		
MAXIMUM/SORT		190 kBq	12 kBq		
MINIMUM/SORT		0 Bq	-7 kBq		
SPECIFIC ACTIVITY		6,428 Bq/kg	35 Bq/	kg	
WORK HISTORY					
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM		
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PH		
START SOIL PROCESSING	05:39 AM	END SOIL PROCESSING	03:12 PM		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr		
WORK HOURS		10.0 hr			
AVAILABLE HOURS		10.0 hr			
ACTUAL PROCESS	HOURS (total 20-sec records)	8.63 hr			
DOWN-TIME		1.37 hr			
TOTAL SYSTEM PA	NUSE	0.89 hr			
NONAVAILABLE HO	DURS	0.0 hr			
START-UP		0.66 hr			
SHUT-DOWN		0.30 hr			
PLANT PERFORMAN	ICE	86.3%			
PRODUCTIVITY		86.3%			
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,783			
NONPROCESS RECORDS (Test, calib	oration, etc)	11			
20-SEC PROCESS RECORDS		1,553			
TOTAL SORT		0=GMM & 0 <gm 0<="" td=""><td></td><td></td><td>•</td></gm>			•
NO SORT		1,382 AD=0 & MD=0 &	MND>0		
SOME SORT		171 AD>0&0 <md<mn0< td=""><td>Maxem CNM3xem</td><td>(</td><td></td></md<mn0<>	Maxem CNM3xem	(
UNEXPLAINED REC		0			
0 <ad<1kbq &="" md=""></ad<1kbq>			UNEXPLAIN	PAUSE	
	& MD 0		TIME	TIME	
AD<0	& MD 0		11:09:54	11:32	

File S1JA0726.WR1

ACT_P <5 kBq

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146

48 20.9%

2-SEC COUNT PERIODS	15	,530	
2-SEC RECORDS WITH SORTS		230 (ACT_P	>0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETE	CTOR ·	
2 DETECTORS	51	89.5%	
3 DETECTORS	6	10.5%	
4 DETECTORS	0	0.0%	
5 DETECTORS	0	0.0%	
6 DETECTORS	0	0.0%	
7 DETECTORS	0	0.0%	
8 DETECTORS	0	0.0%	
TOTAL		57	
NET 2-SEC RECORDS WITH SORTS		173	
2-SEC PERIODS WITH NO SORTS	15	,357	
AVG TIME BETWEEN 2-SEC SORTS	1	79.5 sec	

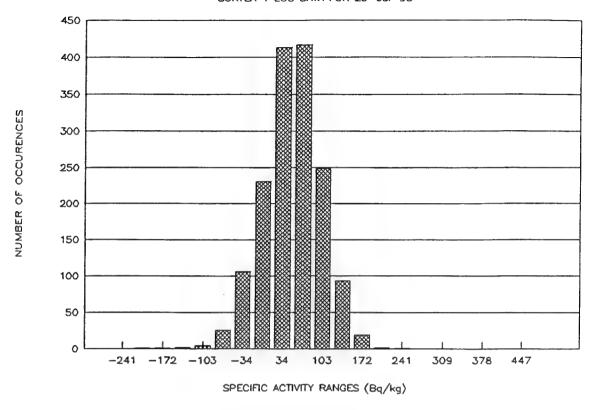
1-GATE S	ORTS	125	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(pg)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	1	0.8%	-14000	0	-241		4000	13	5.7%	4
. 2	7	5.6%	-12000	1	-206		8000	98	42.6%	8
3	13	10.4%	-10000	1	-172		12000	40	17.4%	12
4	18	14.4%	-8000	2	-137		16000	18	7.8%	16
5	30	24.0%	-6000	4	-103		20000	18	7.8%	20
6	28	22.4%	-4000	25	-69		24000	7	3.0%	24
7	20	16.0%	-2000	106	-34		28000	5	2.2%	28
8	8	6.4%	0	231	0		32000	2	0.9%	32
TOTAL	125		2000	414	34		36000	1	0.4%	36
			4000	417	69		40000	0	0.0%	40
2-GATE S	ORTS	105	6000	248	103		44000	1	0.4%	44
DETECTR	SORTS	FREQ%	8000	93	137		48000	4	1.7%	48
8			10000	19	172		52000	2	0.9%	52
9	2	1.9%	12000	2	206		56000	2	0.9%	56
10	9	8.6%	14000	1	241		60000	7	3.0%	60
11	10	9.5%	16000	0	275		64000	1	0.4%	64
12	21	20.0%	18000	0	309		68000	1	0.4%	68
13	33	31.4%	20000	0	344		72000	2	0.9%	72
14	17	16.2%	22000	0	378		76000	2	0.9%	76
15	13	12.4%	24000	0	412		80000	1	0.4%	80
TOTAL	105		26000	0	447		84000	2	0.9%	84
			>28000	0	0		>84000	3	1.3%	>84
			TOTAL	1564			TOTAL	230		
SUMMARY	TOTALS									
		LE EVENTS	223		SORTS BY	ONE	GATE ONLY	125		
ME	JI TIPARTII	CLE EVENTS	85		SORTS BY	TWO	GATES	105		

HOT PARTICLE EVENTS	223	SORTS BY ONE GATE ONLY	125
MULTIPARTICLE EVENTS	85	SORTS BY TWO GATES	105
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

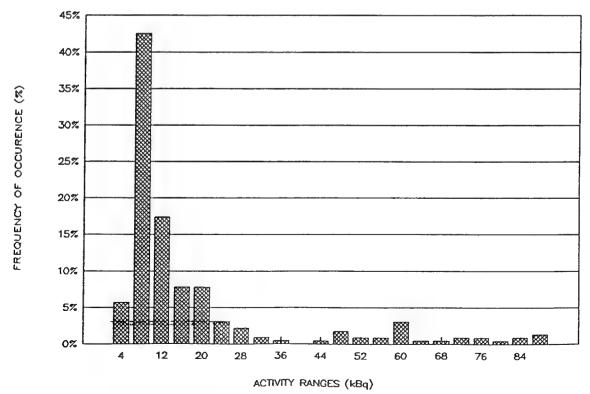
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 26-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 26-Jul-93



SORTER 2 26-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0	0.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
direction delle delle delle	·	CONTAMINATED	CLEAN	
MASS TOTAL		0.21 tons	89.8 ton	s
MAXIMUM/SORT		3.6 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	54.6 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.8%
EQUIVALENT SOIL-IN-GROUND		0.17 yd³	71.2 yd³	71.3 yd3/day
EROTANCENT SOLE IN GROOMS		, -	•	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	E)			
TOTAL	•	4,597 kBq		
MAXIMUM/SORT		297 kBq		
MINIMUM/SORT		3.7 k8q		
		·		
DISPERSED + PARTICLE (REALISTIC EST	TIMATE) ACTIVITY	1,557 k8q	1,358 kBq	
MAXIMUM/SORT		161 kBq	11 kBq	
MINIMUM/SORT		0 8q	-11 kBq	
SPECIFIC ACTIVITY		7,243 Bq/kg	15 Bq/	kg
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:40 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	(total 20-sec records)	8.58 hr		
DOWN-TIME	•	1.42 hr		
TOTAL SYSTEM PAUSE		0.90 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.68 hr		
SHUT-DOWN		0.33 hr		
PLANT PERFORMANCE		85.8%		
PRODUCTIVITY		85.8%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	1,752		
NONPROCESS RECORDS (Test, calibrati		19		
20-SEC PROCESS RECORDS		1,544		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,380 AD=0 & MD=0 8	MND>0	
SOME SORT		164 AD>0&0 <md<mn0< td=""><td></td><td>•</td></md<mn0<>		•
UNEXPLAINED RECORDS	;	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 & M			TIME	TIME
AD<0 & M			14:00:31	08:59
ACT_P <5 kBq	16 7.7%			11:32

File S2JA0726.WR1

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1

15,440

	2-356 60	ONI PERIODS				13,440					
		2-SEC RECORD	S WITH S	SORTS		208	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH F	POSITIVES	IN >1 DI	ETECTOR					
		2	DETECTO	RS	47		85.5%				
		3	DETECTO	ORS	6		10.9%				
		4	DETECTO	RS	2		3.6%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		1	OTAL			55					
		NET 2-SEC RE	CORDS WI	TH SORTS		153					
		2-SEC PERIOD	S WITH N	O SORTS		15,287					
		AVG TIME BET	WEEN 2-S	EC SORTS		201.8	sec				
1-CATE	SORTS	105	ACT_ND	MIMRED	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECT			(Bq)		(Bq/kg)		•	(Bq)	(#)	111047	(kBq)
DETEC	ik Jokis	11,547	(bd)	(")	(od) kg)			(04)	\		(104)
1	1 3	2.9%	-14000	2	-240			4000	3	1.4%	4
2	2 16	15.2%	-12000	3	-206			8000	71	34.1%	8
3	5 17	16.2%	-10000	2	-172			12000	43	20.7%	12
4	23	21.9%	-8000	3	-137			16000	23	11.1%	16
5	5 22	21.0%	-6000	14	-103		;	20000	9	4.3%	20
6	5 13	12.4%	-4000	55	-69		;	24000	10	4.8%	24
7	7 10	9.5%	-2000	181	-34			28000	7	3.4%	28
8	3 1	1.0%	0	346	Ø		:	32000	4	1.9%	32
TOTAL	. 105		2000	444	34		;	36000	2	1.0%	36
			4000	299	69		4	40000	3	1.4%	40
2-GATE	SORTS	103	6000	141	103		4	44000	3	1.4%	44
DETECT	R SORTS	FREQ%	8000	58	137		4	48000	3	1.4%	48
8	3		10000	14	172		:	52000	1	0.5%	52
9	10	9.7%	12000	1	206			56000	6	2.9%	56
10	15	14.6%	14000	0	240		- (60000	4	1.9%	60
11	21	20.4%	16000	0	274			54000	1	0.5%	64
12	24	23.3%	18000	0	309			68000	2	1.0%	88
13	18	17.5%	20000	0	343		7	72000	0	0.0%	72
14	9	8.7%	22000	0	377		7	76000	4	1.9%	76
15	6	5.8%	24000	0	412		Z	30000	1	0.5%	80
TOTAL	. 103		26000	0	446		8	34000	0	0.0%	84
			>28000	0	0		>8	34000	8	3.8%	>84
			TOTAL	1563			1	TOTAL	208		
SUMMAR	Y TOTALS										
	HOT PART	ICLE EVENTS	208		SORTS BY			ſ	105		
		TICLE EVENTS	87		SORTS BY	TWO GA	TES		103		
	DISTRIBUT	TED EVENTS	0								

REC CODE EXPLANATION

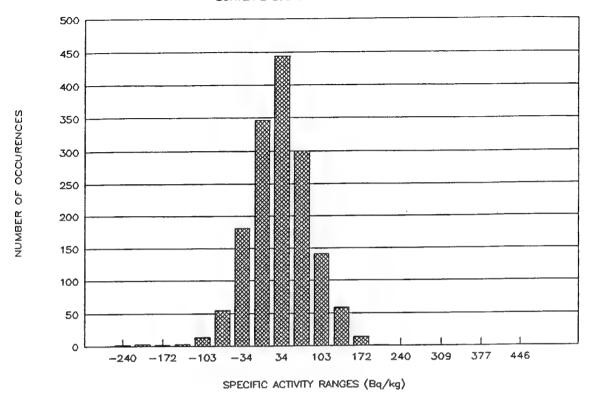
1.00 Source check (Soil on belt)

2.00 Empty belt

2-SEC COUNT PERIODS

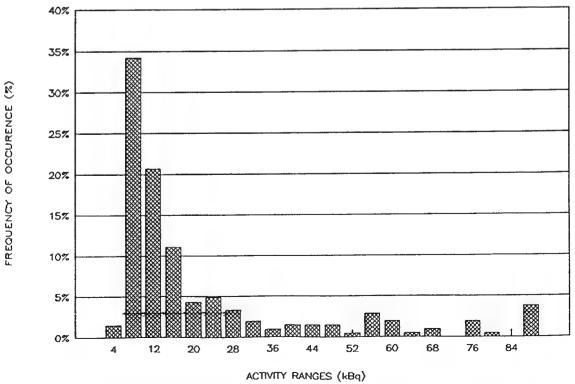
3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 26-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 26-Jul-93



151

SORTER 1 27-Jul-93					
AVERAGE BACKGROUND COUNT RATE		0.74 ±	0.04 c/sec		
SORTER SOIL DENSITY		1.3 tons/	m³		
GROUND SOIL DENSITY		1.65 tons/			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.23 tons	81.5 tor	ne
MAXIMUM/SORT			3.6 kg	58.2 kg	
MINIMUM/SORT			0.7 kg	54.6 kg	
HELCUT BECOVERY OF WOLLING BECOVE	nv				
WEIGHT RECOVERY OR VOLUME RECOVER	KT				99.7%
EQUIVALENT SOIL-IN-GROUND			0.18 yd³	64.6 yd³	64.8 yd ¹ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	ATE)				
TOTAL			3,856 kBq		
MAXIMUM/SORT			128 kBq		
MINIMUM/SORT			3.2 kBq		
			•		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVI	ITY	1,323 k8q	(749)kBq	
MAXIMUM/SORT			73 kBq	9 kBq	
MINIMUM/SORT			0 Bq	-11 kBq	
SPECIFIC ACTIVITY			5,701 Bq/kg	(9)Bq/	kg .
WORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	03:30 PM	•
PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:21 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			40.01		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS HO	UDC (Assal 20 -		10.0 hr		
DOWN-TIME	JKS (total 20-S	ec records)	7.80 hr		
TOTAL SYSTEM PAUS	•		2.20 hr		
NONAVAILABLE HOUR:	_		2.07 hr		•
START-UP	3		0.0 hr		
SHUT-DOWN			0.36 hr		
PLANT PERFORMANCE			0.22 hr		
PRODUCTIVITY			78.0%		
***************************************			78.0%		
TOTAL SOIL PROCESSING RECORDS (2-5	SEC and 20-SEC)		1,627		
NONPROCESS RECORDS (Test, calibrat	tion, etc)		30		
20-SEC PROCESS RECORDS			1,404		
TOTAL SORT			0=0MM & 0<0M 0		
NO SORT			1,239 AD=0 & MD=0 &	MND>0	
SOME SORT			165 AD>0&0 <md<mndi< td=""><td>max&MND<mndmax< td=""><td></td></mndmax<></td></md<mndi<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	/S		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1			UNEXPLAIN	PAUSE
AD=0 &	MD 0			TIME	TIME
AD<0 &	MD 0			15:07:01	08:56
ACT_P <5 kBq	34 1	5.2%			09:57

File S1JA0727_WR1

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152

2-SEC COUNT PERIODS						14,040						
		2-SEC RECORD	S WITH S	SORTS		-		>0 kBq)				
		2-SEC RECORD			IN >1 D		_	•				
	2 DETECTORS				53		88.3%					
			3 DETECTO		6		10.0%					
			4 DETECTO		1		1.7%					
	•		DETECTO		0		0.0%					
			S DETECTO		0		0.0%					
			7 DETECTO		0		0.0%					
			B DETECTO		0		0.0%					
			TOTAL			60						
		NET 2-SEC RE		TH SORTS		163						
		2-SEC PERIOD	S WITH N	O SORTS		13,877						
		AVG TIME BET				172.3						
1-GATE	SORTS	108	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	EREQ%	ACT_P	
DETECT		FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
			•									
1	1	0.9%	-14000	3	-241			4000	7	3.1%	4	
2	9	8.3%	-12000	5	-206			8000	95	42.6%	8	
3	19	17.6%	-10000	11	-172		1	12000	33	14.8%	12	
4	17	15.7%	-8000	16	-137		1	16000	25	11.2%	16	
5	23	21.3%	-6000	35	-103			20000	-11	4.9%	20	
6	17	15.7%	-4000	118	-69			24000	4	1.8%	24	
7	16	14.8%	-2000	261	-34		2	28000	9	4.0%	28	
8	6	5.6%	0	381	0		3	32000	6	2.7%	32	
TOTAL	108		2000	343	34		3	6000	3	1.3%	36	
			4000	175	69		4	0000	1	0.4%	40	
2-GATE	SORTS	115	6000	68	103		4	4000	2	0.9%	44	
DETECT	R SORTS	FREQ%	8000	16	137		4	8000	3	1.3%	48	
8			10000	2	172		5	2000	4	1.8%	52	
9	4	3.5%	12000	0	206		5	6000	3	1.3%	56	
10	14	12.2%	14000	0	241		6	0000	8	3.6%	60	
11	27	23.5%	16000	0	275		6	4000	2	0.9%	64	
12	21	18.3%	18000	0	309		6	8000	0	0.0%	68	
13	25	21.7%	20000	0	344		7	2000	2	0.9%	72	
14	12	10.4%	22000	0	378		7	6000	1	0.4%	76	
15	12	10.4%	24000	0	412		8	0000	0	0.0%	80	
TOTAL	115		26000	0	447		8	4000	1	0.4%	84	
			>28000	0	0		>8	4000	3	1.3%	>84	
			TOTAL	1434			T	OTAL	223			
SUMMARY	Y TOTALS		***						400			
			SORTS BY				108					
		ICLE EVENTS	86		SORTS BY	IWO GA	IES		115			
	DISTRIBUT	ED EVENTS	0									

REC CODE EXPLANATION

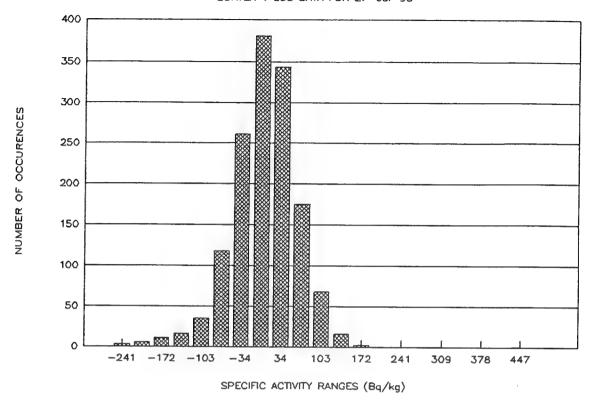
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

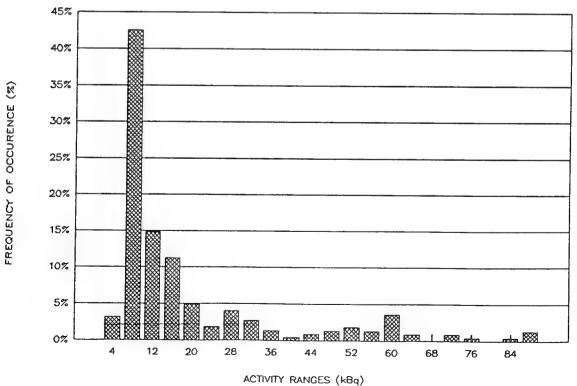
11:27 15:00

SORTER 1 LOG DATA FOR 27-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 27-Jul-93



SORTER 2 27-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.77 ± 0	.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³			
GROUND SOIL DENSITY	1.65 tons/m ³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.26 tons	82.9 tons	3
MAXIMUM/SORT		7.3 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	51 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.7%
FOULVALENT SOIL-IN-GROUND		0.21 yd³	65.7 yd³	65.9 yd3/day
EGOLANCEM 2015-14 GROOMS		7.5	•	•
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		14,097 kBq		
MAXIMUM/SORT		4,469 kBq		
MINIMUM/SORT		3.0 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	4,524 kBq	1,126 kBq	
	IIMAIE/ ACIIVIII	2631 kBq	18 kBq	
MAXIMUM/SORT MINIMUM/SORT		0 Bq	-14 kBq	
SPECIFIC ACTIVITY		17,220 Bq/kg	14 Bq/1	
or Lott to Notititi.		•	·	
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:21 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	7.93 hr		
DOWN-TIME		2.07 hr		
TOTAL SYSTEM PAUSE		2.06 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.36 hr		
SHUT-DOWN		0.15 hr		
PLANT PERFORMANCE		79.3%		
PRODUCTIVITY		79.3%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	1,676		
NONPROCESS RECORDS (Test, calibrat		8		
20-SEC PROCESS RECORDS		1,427		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,242 AD=0 & MD=0 &	MND>0	
SOME SORT		185 AD>0&0 <md<mnd< td=""><td>max&MND<mndma< td=""><td>K</td></mndma<></td></md<mnd<>	max&MND <mndma< td=""><td>K</td></mndma<>	K
UNEXPLAINED RECORD	s	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &	MD Ü		TIME	TIME
AD<0 &	MD 0		None	08:56
ACT_P <5 kBq	34 13.7%			09:57

File S2JA0727.WR1

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1

14,270

		2-SEC RECORD	S WITH S	ORTS		249	(ACT_P >0 k	(p8		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
2 DETECTORS					67		77.9%			
	3 DETECTORS						14.0%			
		4	DETECTO	RS	4		4.7%			
	5 DETECTORS				3		3.5%			
		•	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	O		0.0%			
		8	DETECTO	RS	0		0.0%			
		ו	TOTAL			86				
		NET 2-SEC RE	CORDS WI	TH SORTS		163				
		2-SEC PERIOD	S WITH N	O SORTS		14,107				
		AVG TIME BET	WEEN 2-S	EC SORTS		175.1	sec			
1-GATE S	ORTS	125	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQX	(Bq)		(Bq/kg)		(Bq)			(kBq)
			•				•			•
1	4	3.2%	-14000	0	-240		4000	14	5.6%	4
. 2	12	9.6%	-12000	4	-206		8000	82	32.9%	8
3	16	12.8%	-10000	1	-172		12000	46	18.5%	12
4	28	22.4%	-8000	13	-137		16000	31	12.4%	16
5	25	20.0%	-6000	64	-103		20000	13	5.2%	20
6	26	20.8%	-4000	156	-69		24000	5	2.0%	24
7	13	10.4%	-2000	234	-34		28000	7	2.8%	28
8	1	0.8%	O	197	0		32000	2	0.8%	32
TOTAL	125		2000	171	34		36000	6	2.4%	3 6
			4000	178	69		40000	3	1.2%	40
2-GATE S		124	6000	208	103		44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	131	137		48000	2	0.8%	48
8	_		10000	60	172		52000	3	1.2%	52
9	8	6.5%	12000	13	206		56000	3	1.2%	56
10	11	8.9%	14000	3	240		60000	2	0.8%	60
11	24	19.4%	16000	1	274		64000	3	1.2%	64
12	24	19.4%	18000	0	309		68000	1	0.4%	68
13	27	21.8%	20000	1	343		72000	3	1.2%	72 74
14 15	21 9	16.9%	22000	0	377		76000	5	2.0%	76
TOTAL	124	7.3%	24000 26000	0	412 446		80000 84000	2	0.8% 0.4%	80 84
TOTAL	124		>28000		440					
			TOTAL	1435	U		>84000 TOTAL		6.0%	>84
SUMMARY 1	2 IATO		TOTAL	1433			IUIAL	247		
		CLE EVENTS	239		SORTS BY	ONE CA	TE ONLY	125		
	HOT PARTICLE EVENTS 239 MULTIPARTICLE EVENTS 122				SORTS BY			124		
		ED EVENTS	0		JON 13 91	0/		164		
			•							

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

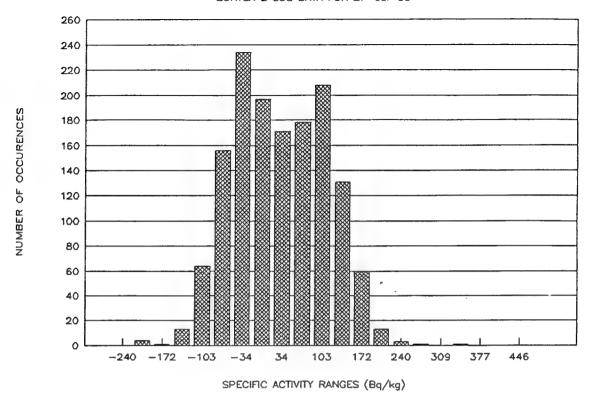
2-SEC COUNT PERIODS

3.00 Test (No process soil)

File S2JA0727.WR1

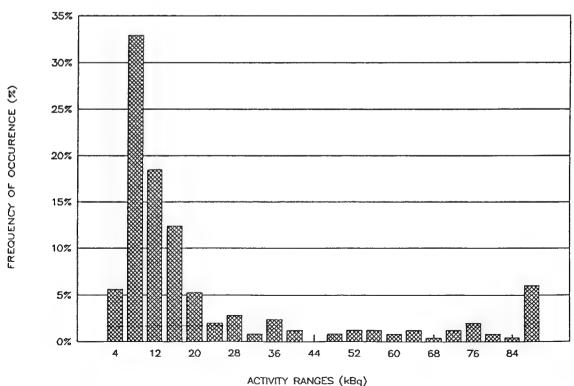
11:27

SORTER 2 LOG DATA FOR 27-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 27-Jul-93



SORTER 1	28-Jul-93										
AVERAGE BACKGROUNI	COUNT PATE			0.76		0.05	c/sec				
SORTER SOIL DENSIT					tons/		C/ SEC				
GROUND SOIL DENSIT					tons/						
ditonio delle beneri						•••	CONTAMIN	NATED	CLEAN		
MASS TOTAL							0.28 t		89.1	tons	
MAXIMUM/SOF	श						4.4 k	(g	58.2	kg	
MINIMUM/SOF							0.7 k	(g	53.9	-	
WEIGHT RECOVERY OF	R VOLUME RECOVERY										99.7%
EQUIVALENT SOIL-IN	i-ground						0.22 y	√q ₃	70.6	yd³	70.8 yd3/day
PARTICLE ACTIVITY	(MAXIMUM ESTIMATE)									
TOTAL							5,591 k	(Bq			
MAXIMUM/SOF	RT						229 k	(Bq			
MINIMUM/SOR	RT						3.1 k	(Bq			
DISPERSED + PARTIC	CLE (REALISTIC EST	IMATE)	ACTI	VITY			1,904 k	(8q	(730)	kBq	
MAXIMUM/SOR	RT						154 k	(Bq	11	kBq	
MINIMUM/SOR	RT						0.8	Bq	-10	kBq	
SPECIFIC AC	CTIVITY						6,798 B	lq/kg	(8)	Bq/kg	
WORK HISTORY											
WORK DAY ST	ART	05:00	AM				WORK DAY	END	03:30 PM		
PLANT START	-UP	05:00	AH				PLANT SH	IUT-DOWN	03:30 PM		
START SOIL	PROCESSING	05:27	AM				END SOIL	PROCESSING	03:11 PM		
LUNCH START	•	11:30	AM				LUNCH PE	RIOO	0.5 (hr	
WO	ORK HOURS							10.0 hr			
VA	AILABLE HOURS							10.0 hr			
AC C	TUAL PROCESS HOUR	S (tota	al 20	-sec r	ecords)		8.53 hr			
DO	WN-TIME							1.47 hr			
TO	TAL SYSTEM PAUSE							1.14 hr			
NO	MAVAILABLE HOURS							0.0 hr			
ST	ART-UP							0.47 hr			
SH	UT-DOWN							0.31 hr			
PL	ANT PERFORMANCE							85.3%			
PR	ODUCTIVITY							85.3%			
TOTAL SOIL PROCESS	· ·			C)				1,811			
NONPROCESS RECORDS	(Test, calibration	on, etc	:)					17			
20-SEC PROC	ESS RECORDS						1,535				
	TAL SORT							0=0MM & 0<0			
	SORT							8 O=GM & O=G			
	ME SORT							D>0&0 <md<< td=""><td>ONM> DAM&xam</td><td>max</td><td></td></md<<>	ONM> DAM&xam	max	
	EXPLAINED RECORDS						0				
0<	AD<1kBq & MD>0		0						UNEXPLAIN		AUSE
	AD=0 & MD		0						TIME		TIME
	AD<0 & MD		0	ייל חוד	,				None		11:23
AC	T_P <5 kBq		57	20.77	•						

File S1JA0728.WR1

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158

1

15,350

	5-SEC CO	UNT PERIODS				13,330					
		2-SEC RECORD					(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	66		84.6%				
		3	DETECTO	RS	9		11.5%				
			DETECTO		3		3.8%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
			OTAL			78					
		NET 2-SEC RE				198					
		2-SEC PERIOD				15,152					
		AVG TIME BET	WEEN 2-S	EC SORTS		155.1	sec				
		.=-						ACT D	2007	FREQ%	ACT D
1-GATE		139	ACT_ND		SPEC_A			ACT_P	(#)	FREUM	ACT_P (kBq)
DETECT	R SORTS	FREQ%	(bq)	(#)	(Bq/kg)			(Bq)	(#)		(604)
1	2	1.4%	-14000	ō	-241			4000	15	5.4%	4
2	15	10.8%	-12000	3	-206			8000	115	41.7%	8
3	18		-10000	4	-172			12000	50	18.1%	12
4	30		-8000	4	-137			16000	22	8.0%	16
5	36		-6000	43	-103			20000	7	2.5%	20
6	22		-4000	124	-69			24000	12	4.3%	24
7	16		-2000	294	-34			28000	5	1.8%	28
8	0		0	415	0			32000	5	1.8%	32
TOTAL	139		2000	377	34			36000	3	1.1%	36
			4000	198	69			40000	2	0.7%	40
2-GATE	SORTS	137	6000	74	103			44000	0	0.0%	44
DETECT		FREQ%	8000	12	137			48000	2	0.7%	48
8			10000	2	172			52000	4	1.4%	52
9	4	2.9%	12000	2	206			56000	5	1.8%	56
10	20	14.6%	14000	0	241			60000	5	1.8%	60
11	21	15.3%	16000	0	275			64000	6	2.2%	64
12	36	26.3%	18000	0	309			68000	2	0.7%	68
13	28	20.4%	20000	0	344			72000	2	0.7%	72
14	18	13.1%	22000	0	378			76000	1	0.4%	76
15	10	7.3%	24000	0	412			80000	2	0.7%	80
TOTAL	137		26000	0	447			84000	0	0.0%	84
			>28000	0	0		>	84000	- 11	4.0%	>84
			TOTAL	1552				TOTAL	276		
SUMMAR	Y TOTALS										
	HOT PART	ICLE EVENTS	269		SORTS BY	ONE GA	ATE ONL	Y	139		
	MULTIPAR	TICLE EVENTS	115		SORTS BY	TWO GA	ATES		137		
	DISTRIBU	TED EVENTS	0								

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

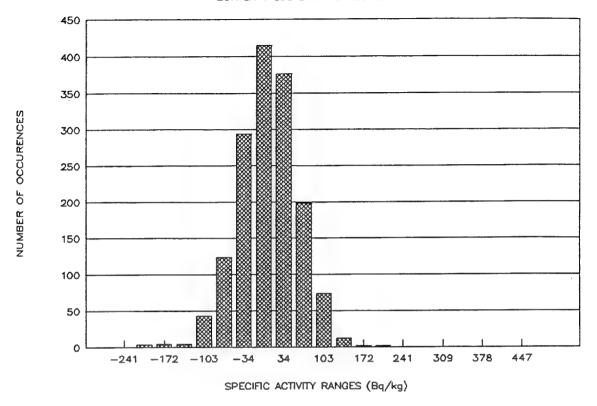
2-SEC COUNT PERIODS

3.00 Test (No process soil)

File S1JA0728.WR1

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SORTER 1 LOG DATA FOR 28-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 28-Jul-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 52 60 68 76 20 28 36 44 12

SORTER 2	28-Jul-93										
AVERAGE BACKGROUND	COUNT RATE		0.80	±	0.00	c/sec					
SORTER SOIL DENSIT			1.3	tons/m	13						
GROUND SOIL DENSIT			1.65	tons/m	n ³						
						CONTAM	INATED	CLEAN			
MASS TOTAL						0.28	tons	89.0	tons		
MAXIMUM/SOR	eT .					5.1	kg	58.3	kg		
MINIMUM/SOR						0.7	kg	53.2	kg		
WEIGHT RECOVERY OF	VOLUME RECOVERY									99.7%	
EQUIVALENT SOIL-IN						0.22	λq ₂	70.6	λq_3	70.8 yd3/da	iy
PARTICLE ACTIVITY	(MAXIMUM ESTIMATE	•									
TOTAL						6,171	kBq				
MAXIMUM/SOR	RT						kBq				
MINIMUM/SOF	RT					3.3	kBq				
DISPERSED + PARTIC	DE ADEAL POTTO ECT	INATEL ACTIV	/ITY			2,118	kBa	5,455	kBq		
		THATE, AUT.				•	kBq	14	kBq		
MAXIMUM/SOR MINIMUM/SOR							Bq	-5	kBq		
SPECIFIC AC							Bq/kg	61	Bq/kg		
SPECIFIC AC						•					
WORK HISTORY											
WORK DAY ST	TART	05:00 AM				WORK D	AY END	03:30 PM			
PLANT START	r-UP	05:00 AM					SHUT-DOWN	03:30 PM			
START SOIL	PROCESSING	05:28 AM					IL PROCESSING				
LUNCH START	Г	11:30 AM				LUNCH	PER IOD	0.5	hr		
LK	ORK HOURS						10.0 hr				
	AILABLE HOURS						10.0 hr				
	TUAL PROCESS HOUR	RS (total 20-	-sec r	ecords))		8.51 hr				
	OWN-TIME	(0 (10111 11			•		1.49 hr				
	OTAL SYSTEM PAUSE						1.14 hr				
	NAVAILABLE HOURS						0.0 hr				
	FART-UP						0.48 hr				
	KUT-DOWN						0.31 hr				
	ANT PERFORMANCE						85.1%				
	RODUCTIVITY						85.1%				
							1 747				
TOTAL SOIL PROCESS			()				1,763 20				
NONPROCESS RECORDS		ion, etc)				1,532	_				
	CESS RECORDS) MD>0 & MND=0				
	OTAL SORT						0=0M & 0=0A (O<00M			
	O SORT					-	AD>0&0 AD>0&0		INDmax		
	DME SORT	•				222		The second second			
	NEXPLAINED RECORDS	S 0				•	•	UNEXPLAI	N	PAUSE	
0	<ad<1kbq &="" md="">0</ad<1kbq>	_						TIME		TIME	
	AD=0 & I							None		11:23	
	AD<0 & I	MD 0 32	13.9	192							
A	CT_P <5 kBq	JL	13.7	~							

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1

231 (ACT_P >0 kBq)

15,320

		Z-SEL KELUKL	2 MILL 2	UKIS		2.3 :	(ACI_	. So Kedy			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	ЖS	56		81.2%				
		3	DETECTO	RS	12		17.4%				
		4	DETECTO	ORS	1		1.4%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		1	DATO			69					
		NET 2-SEC RE	CORDS WI	TH SORTS		162					
		2-SEC PERIOD	S WITH N	IO SORTS		15,158					
		AVG TIME BET	WEEN 2-S	EC SORTS		189.1	sec				
1-GATE	E SORTS	121	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECT	TR SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(pg)	(#)		(kBq)
	1 2	1.7%	-14000	0	-240			4000	9	3.9%	4
- 2	2 13	10.7%	-12000	0	-206			8000	84	36.4%	8
3	3 25	20.7%	-10000	2	-172			12000	36	15.6%	12
4	4 23	19.0%	-8000	9	-137			16000	21	9.1%	16
5	5 26	21.5%	-6000	3	-103			20000	14	6.1%	20
6	5 16	13.2%	-4000	8	-69			24000	9	3.9%	24
7	7 15	12.4%	-2000	33	-34			28000	8	3.5%	28
E	3 1	0.8%	0	117	0			32000	8	3.5%	32
TOTAL	121		2000	298	34			36000	3	1.3%	36
			4000	438	69			40000	3	1.3%	40
2-GATE	SORTS	110	6000	352	103			44000	4	1.7%	44
DETECT	TR SORTS	FREQ%	8000	193	137			48000	2	0.9%	48
8	3		10000	79	172			52000	3	1.3%	52
9	5	4.5%	12000	17	206			56000	1	0.4%	56
10	15	13.6%	14000	2	240			60000	2	0.9%	60
11	1 27	24.5%	16000	1	274			64000	3	1.3%	64
12	2 20	18.2%	18000	0	309			68000	4	1.7%	88
13	3 20	18.2%	20000	O	343			72000	2	0.9%	72
14	15	13.6%	22000	0	377			76000	4	1.7%	76
15	8	7.3%	24000	0	412			80000	2	0.9%	80
TOTAL	. 110		26000	0	446			84000	2	0.9%	84
			>28000	0	0		>	84000	7	3.0%	>84
			TOTAL	1552				TOTAL	231		
SUMMAR	RY TOTALS										
	HOT PART	ICLE EVENTS	229		SORTS BY	ONE 'GA	ATE ONL	Υ	121		
	MULTIPAR	TICLE EVENTS	153		SORTS BY	TWO GA	NTES		110		
	DISTRIBUT	TED EVENTS	0								

REC CODE EXPLANATION

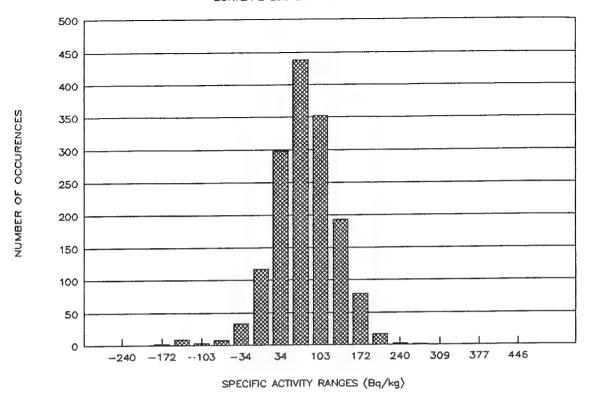
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

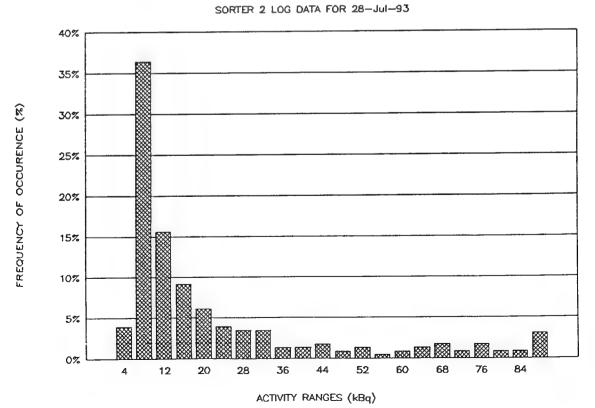
2-SEC RECORDS WITH SORTS

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 28-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 1 29-Jul-93					
AVERAGE BACKGROUND COUNT RATE	0.77	±	0.04 c/sec		
SORTER SOIL DENSITY	1.3	tons/m³			
GROUND SOIL DENSITY	1.65	tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.44 tons	90.5 to	ns
MAXIMUM/SORT			5.1 kg	58.2 kg	
MINIMUM/SORT			0.7 kg	53.1 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY					99.5%
EQUIVALENT SOIL-IN-GROUND			0.35 yd³	71.8 yd	3 72.1 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)					
TOTAL			7,866 kBq		
MAXIMUM/SORT			419 kBq		
MINIMUM/SORT			2.9 kBq		
DISPERSED + PARTICLE (REALISTIC ESTI	MATE) ACTIVITY		2,777 kBq	2,720 kBd	q
MAXIMUM/SORT			269 k8q	15 kBd	9
MINIMUM/SORT			0 Bq	-8 kB	9
SPECIFIC ACTIVITY			6,330 Bq/kg	30 Bq.	/kg
WORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:22 AM		END SOIL PROCESSING	03:15 PM	

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	8.68 hr
DOWN-TIME	1.32 hr
TOTAL SYSTEM PAUSE	1.28 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.38 hr
SHUT-DOWN	0.24 hr
PLANT PERFORMANCE	86.8%
PRODUCTIVITY	86.8%

LUNCH PERIOD

0.5 hr

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,987
NONPROCESS RECORDS (Test, calibration, etc)	17

11:30 AM

20-SEC PROCESS	RECORDS	1,563

LUNCH START

TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,249 AD=0 & MD=0 & MND>0
SOME SORT	314 AD>0&0 <md<mndmax&mnd<mndmax< th=""></md<mndmax&mnd<mndmax<>

UNEXPLAINED RECORDS			0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	4			UNEXPLAIN	PAUSE
AD=0 & MD	0			TIME	TIME
AD < 0 > CA	0			05:40:45	11:29
ACT_P <5 kBq	86	20.3%		08:04:25	15:18

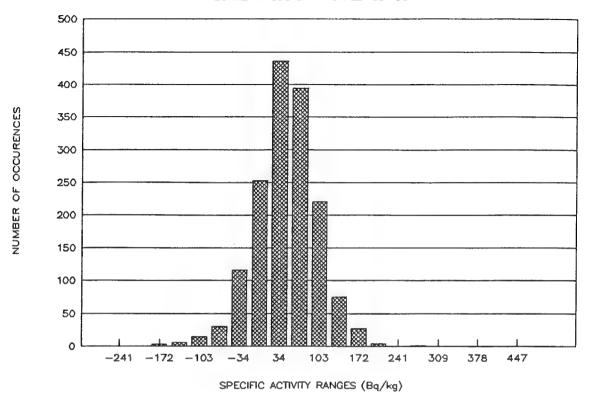
File S1JA0729.WR1 Printed on 07/30/93 at 11:07:43 AM

2	-SEC COU	NT PERIODS				15,630			1-	4:11:25
-		2-SEC RECORD	S WITH S	ORTS			(ACT_P >0 kBq)	10	4:27:05
		2-SEC RECORD			IN >1 DE					
			DETECTO		96		81.4%			
			DETECTO		19		16.1%			
			DETECTO		3		2.5%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		Ţ	OTAL.			118				
		NET 2-SEC RE	CORDS WI	TH SORTS		306				
		2-SEC PERIOD	S WITH N	O SORTS		15,324				
		AVG TIME BET	WEEN 2-S	EC SORTS		102.2	sec			
1-GATE S	ORTS	219	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	2	0.9%	-14000	0	-241		4000	50	4.7%	4
2	14	6.4%	-12000	0	-206		8000	187	44.1%	8
3	32	14.6%	-10000	3	-172		12000	52	12.3%	12
4	30	13.7%	-8000	6	-137		16000	39	9.2%	16
5	46	21.0%	-6000	15	-103		20000	24	5.7%	20
6	43	19.6%	-4000	30	-69		24000	17	4.0%	24
7	43	19.6%	-2000	116	-34		28000	15	3.5%	28
8	9	4.1%	0	253	0		32000	10	2.4%	32
TOTAL	219		2000	436	34		36000	15	3.5%	36
			4000	394	69		40000	6	1.4%	40
2-GATE S	ORTS	205	6000	220	103		44000	2	0.5%	44
DETECTR	SORTS	FREQ%	8000	75	137		48000	6	1.4%	48
8			10000	27	172		52000	2	0.5%	52
9	6	2.9%	12000	4	206		56000	2	0.5%	56
10	20	9.8%	14000	0	241		60000	3	0.7%	60
11	32	15.6%	16000	1	275		64000	1	0.2%	64
12	34	16.6%	18000	0	309		68000	3	0.7%	68 72
13	43	21.0%	20000	0	344		72000	3	0.7%	76
14	42	20.5%	22000	0	378		76000	3	0.7% 0.7%	80
15	28	13.7%	24000	0	412		80000	3	0.7%	84
TOTAL	205		26000	0	447		84000 >84000	10	2.4%	>84
			>28000	4500	0			424	2.44	704
DI MATERIA DAT	TOTA: 0		TOTAL	1580			TOTAL	424		
SUMMARY		CLE EVENTS	416		SORTS BY	DNE GA	TE ONLY	219		
		CLE EVENTS	185		SORTS BY			205		
		ICLE EVENTS	0		30413 01	ino or	1124	_07		
C	TSTKIBUT	ED EVENTS	U							

REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 29-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 29-Jul-93

50%

12

20

28

44

76

SORTER 2 29-Jul-93				
SURTER 2 27 Sut 73				
AVERAGE BACKGROUND COUNT RATE	· 0.80 ± 0.	.01 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³			
GROUND SOIL DENSITY	1.65 tons/m³		0.544	
		CONTAMINATED	CLEAN O1 1 tons	
MASS TOTAL		0.44 tons	91.1 tons 58.3 kg	
MAXIMUM/SORT		5.8 kg	52.4 kg	
MINIMUM/SORT		0.7 kg	32.4 Kg	
THE DESCRIPTION OF MOLINE RECOVE	DV			99.5%
WEIGHT RECOVERY OR VOLUME RECOVE EQUIVALENT SOIL-IN-GROUND	K1	0.35 yd³	72.2 yd³	72.5 yd3/day
Edotayeest 2015-14-000000		•		
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)			
TOTAL	•	9,721 kBq		
MAXIMUM/SORT		602 kBq		
MINIMUM/SORT		2.8 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	3,417 kBq	5,798 kBq	
MAXIMUM/SORT		339 kBq	14 kBq	
MINIMUM/SORT		0 Bq	-6 kBq	
SPECIFIC ACTIVITY		7,734 Bq/kg	64 Bq/k	g
WORK HISTORY	05-00 44	WORK DAY END	03:30 PM	
WORK DAY START	05:00 AM 05:00 AM	PLANT SHUT-DOWN	03:30 PM	
PLANT START-UP	05:22 AM	END SOIL PROCESSING		
START SOIL PROCESSING LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
LONGIT START				
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS H	OURS (total 20-sec records)	8.72 hr		
DOWN-TIME		1.28 hr		
TOTAL SYSTEM PAU		1.28 hr		
NONAVAILABLE HOU	IRS	0.0 hr		
START-UP		0.38 hr		
SHUT-DOWN		0.23 hr		
PLANT PERFORMANO	:E	87.2% 87.2%		
PRODUCTIVITY		01.24		
TOTAL SOIL PROCESSING RECORDS (2	P-SEC and 20-SEC)	1,991		
NONPROCESS RECORDS (Test, calibr		10		
20-SEC PROCESS RECORDS	•	1,570		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,246 AD=0 & MD=0 &	MND>0	
SOME SORT		324 AD>0&0 <md<mn< td=""><td>max&MND<mndmax< td=""><td>τ</td></mndmax<></td></md<mn<>	max&MND <mndmax< td=""><td>τ</td></mndmax<>	τ
UNEXPLAINED RECO	ORDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0	& MD 0		TIME	TIME
AD<0			None	11:29
ACT_P <5 kBq	62 14.7%			15:18

File S2JA0729.WR1

Printed on 07/30/93 at 11:26:54 AM

15,700

	2-SEC CO	UNI PERIODS				15,700				
		2-SEC RECORD	S WITH S	ORTS		421	(ACT_P >0 kBq)		
2-SEC RECORDS WITH POSITIVES						TECTOR				
		2	DETECTO	RS	103		83.7%			
		3	DETECTO	RS	17		13.8%			
		4	4 DETECTORS				2.4%			
		5	DETECTO	RS	0		0.0%			
		•	DETECTO	RS	0		0.0%			
			DETECTO		0		0.0%			
			DETECTO	RS	. 0		0.0%			
		1	JATO			123				
		NET 2-SEC RE	CORDS WI	TH SORTS		298				
		2-SEC PERIOD	S WITH N	O SORTS		15,402				
		AVG TIME BET	WEEN 2-S	EC SORTS		105.4	sec			
1-CATE	SORTS	227	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECT			(Bq)		(Bq/kg)		(Pg)	(#)	***************************************	(kBq)
DE IEG.		1 11221	(04)	,	(54) (3)		(54)	42		(
1	11	4.8%	-14000	0	-240		4000	17	4.0%	4
2	2 35	15.4%	-12000	1	-206		8000	160	38.0%	8
3	44	19.4%	-10000	3	-172		12000	69	16.4%	12
4	43	18.9%	-8000	1	-137		16000	37	8.8%	16
5	38	16.7%	-6000	2	-103		20000	19	4.5%	20
6	28	12.3%	-4000	6	-69		24000	24	5.7%	24
7	23	10.1%	-2000	40	-34		28000	13	3.1%	28
8	5	2.2%	0	128	0		32000	7	1.7%	32
TOTAL	. 227		2000	284	34		36000	12	2.9%	36
			4000	426	69		40000	5	1.2%	40
2-GATE	SORTS	194	6000	341	103		44000	- 11	2.6%	44
DETECT	R SORTS	FREQ%	8000	216	137		48000	6	1.4%	48
8	I		10000	104	172		52000	1	0.2%	52
9	22	11.3%	12000	22	206		56000	3	0.7%	56
10	31	16.0%	14000	7	240		60000	4	1.0%	60
11	40	20.6%	16000	9	274		64000	1	0.2%	64
12	34	17.5%	18000	0	309		68000	1	0.2%	68
13	32	16.5%	20000	0	343		72000	4	1.0%	72
14	22	11.3%	22000	0	377		76000	6	1.4%	76
15	13	6.7%	24000	0	412		80000	2	0.5%	80
TOTAL	194		26000	0	446		84000	5	1.2%	84
			>28000	0	0		>84000	14	3.3%	>84
			TOTAL	1580			TOTAL	421		
SUMMAR	Y TOTALS									
	HOT PART	ICLE EVENTS	405		SORTS BY			227		
	MULTIPAR	TICLE EVENTS	202		SORTS BY	TWO GA	TES	194		
	DISTRIBU	TED EVENTS	0							

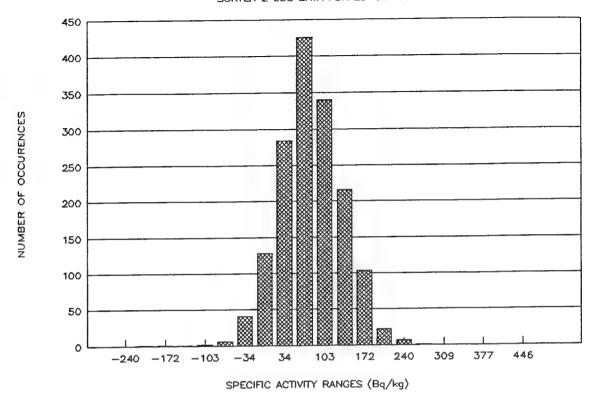
REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

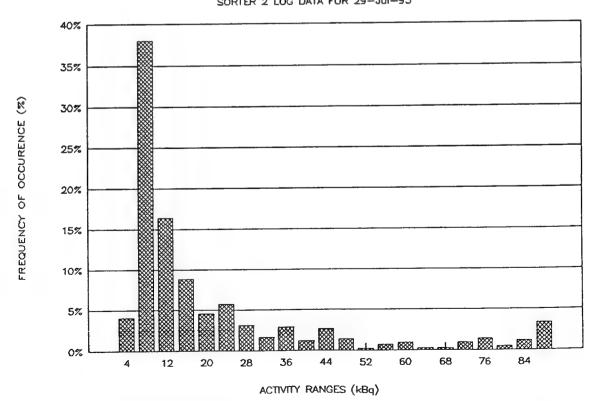
2-SEC COUNT PERIODS

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 29-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 29-Jul-93



AVERAGE BACKGROUND COUNT RATE 1.3 tons/m² SORTES SOLT DENSITY 1.50 tons/m² SORTES SOLT DENSITY 1.65 tons/m² 1.65 tons/m² CONTAININATED CONTAIN	SORTER 1 30-Jul-93				
### STOTAL 0.58 tons/m² 0.58 tons/m² 0.58 tons	AVERAGE BACKGROUND COUNT RATE	0.	71 ± 0.03 c/sec		
MASS TOTAL MAST MAXIMM/SORT MAXIMM/SORT MINIMUM/SORT MAXIMM/SORT MINIMUM/SORT MEIGHT RECOVERY COLUME RECOVERY EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMM ESTIMATE) TOTAL MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MINIMM/SORT MAXIMM/SORT MAXIMM/SORT MAXIMM/SORT MINIMM/SORT MAXIMM/SORT MAXIMM/SORT MORE DAY START MORE MISSORS MORE M	SORTER SOIL DENSITY	1	.3 tons/m³		
MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT TOTAL TOTAL MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT TOTAL MAXIMUM/SORT TOTAL MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MORK DAY START MORK DAY ST	GROUND SOIL DENSITY	1.	65 tons/m³		
MAXIMAM/SORT 5.8 kg 58.2 kg NINIMAM/SORT 0.7 kg 52.4 kg 99.5%			CONTAMINATED	CLEAN	
MINIMUM/SORT 0.7 kg 52.4 kg METGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 0.46 yd³ 88.0 yd³ 88.5 yd³/day PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL 17,592 kBq 3,131 kBq 3,131 kBq 4 16 kBq MAXIMUM/SORT 3.0 kBq DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 5,632 kBq 16 kBq MINIMUM/SORT 1950 kBq 16 kBq MINIMUM/SORT 9,642 Bq/kg 51 Bq/kg MORK MISTORY MORK DAY START 04:30 AM MORK DAY END 04:30 PM PLANT START-UP 04:30 AM PLANT SINT-DOWN 04:30 PM PLANT START-UP 04:30 AM PLANT SINT-DOWN 04:30 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr START SOIL PROCESSING 04:46 AM END SOIL PROCESSING 04:02 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr AVAILABLE HOURS 11:30 AM LUNCH PERIOD 0.0 hr TOTAL START-UP 0.26 hr AVAILABLE HOURS 0.0 hr START-UP 0.28 hr FINIT-DOWN 0.0 hr START-UP 0.28 hr FINIT-DOWN 0.0 hr START-UP 0.28 hr FINIT-DOWN 0.0 hr START-UP 0.28 hr START-UP 0.28 hr TOTAL SOIL PROCESSING 0.4 hr PRODUCTIVITY 888.6% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,511 NON-ROCESS RECORDS (7-SEC, calibration, etc) 4 20-SEC PROCESS RECORDS (7-SEC, calibration, etc) 4 20-SEC PROCESS RECORDS (7-SEC, calibration, etc) 4 20-SEC PROCESS RECORDS (7-SEC and 20-SEC) 1,7917 TOTAL SORT 0.0 hD-0 & HND-0 & HD-0 &	MASS TOTAL		0.58 tons	111.0 to	ons
MORK PLATE STATE OF COURS 12.0 hr 1.35 hr 1.130 ml 1.35 hr 1.130 ml 1.35 hr 1.35	MAXIMUM/SORT		5.8 kg	58.2 kg	I
EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT MORK PARTICLE (REALISTIC ESTIMATE) ACTIVITY MORK DAY START MORK HURS MORK DAY START MOR	MINIMUM/SORT		0.7 kg	52.4 kg	ı
EQUIVALENT SOIL-IN-GROUND PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT MORK PARTICLE (REALISTIC ESTIMATE) ACTIVITY MORK DAY START MORK DAY	HETCHT RECOVERY OF VOLUME RECOVER	ov.			00 5%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MORK DAY FART MORK DAY START MORK DOUGH START MORK DOUGH START MORK HOURS MORK DAY START MORK HOURS MORK DAY START MORK DOUGH START MORK HOURS MORK DAY START MORK HOURS MORK DAY START MORK DAY START MORK HOURS MORK DAY START MORK DAY STA	VIII. 1		0 46 vd3	88.0 vd	
TOTAL MAXIMUM/SORT NINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MAXIMUM/SORT SPECIFIC ACTIVITY MORK DAY START MORK DAY SHAR DAY SH	EMOLANCEM! SOLE-IN BUCOUND		0.40 ya	00.0 /0	5515 /4 /44/
MAXIMUM/SORT 3,131 kBq 3.0 kBq 5,693 kBq	PARTICLE ACTIVITY (MAXIMUM ESTIMA	NTE)			
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVAL PROBLEM TO BE A LOWER TO B	TOTAL		17,592 k8q		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY MORK DAY START MORK DAY END MORK	MAXIMUM/SORT		3,131 kBq		
MAXIMUM/SORT 1950 kBq 16 kBq 16 kBq 11 kBq 12 kBq 12 kBq 12 kBq 13 kBq 14	MINIMUM/SORT		3.0 kBq		
MAXIMUM/SORT 1950 kBq 16 kBq 16 kBq 11 kBq 12 kBq 12 kBq 12 kBq 13 kBq 14	DISDEPSED + PARTICLE (REALISTIC S	STIMATE) ACTIVITY	5 632 kRa	5.693 kg	da .
MINIMUM/SORT SPECIFIC ACTIVITY MORK HISTORY MORK DAY START MOR		SITANIE, ACTIVITI			
WORK HISTORY MORK DAY START 04:30 AM MORK DAY END 04:30 PM			•		•
WORK DAY START O4:30 AM			,		
WORK DAY START 04:30 AM WORK DAY END 04:30 PM PLANT START-UP 04:30 AM PLANT SHUT-DOWN 04:30 PM START SOIL PROCESSING 04:46 AM END SOIL PROCESSING 04:02 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr WORK HOURS AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) 10.65 hr DOWN-TIME 1.35 hr TOTAL SYSTEM PAUSE 0.62 hr NONAVAILABLE HOURS 0.028 hr SHUT-DOWN 0.28 hr SHUT-DOWN 0.46 hr PLANT PERFORMANCE 88.8% PRODUCTIVITY 88.8.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,511 NONPROCESS RECORDS 1,917 TOTAL SOIL PROCESSING RECORDS 1,917 TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,917 TOTAL SOIL PROCESSING RECORDS (1-st, catibration, etc) 4 20-SEC PROCESS RECORDS 1,917 TOTAL SORT 0 MD>0 & MND=0 NO SORT 1,530 AD=0 & MD=0 & MND>0 SOME SORT 387 AD>0&0<0+MDmax&MND <mndmax &="" 0="" md="" o<ad<164="" records="" unexplained="">0 UNEXPLAIN PAUSE TIME TIME</mndmax>	SPECIFIC ACTIVITY		7,04E bdykg	31 39	, , ,
PLANT START-UP	WORK HISTORY				
START SOIL PROCESSING	WORK DAY START	04:30 AM	WORK DAY END	04:30 PM	
LUNCH START 11:30 AM	PLANT START-UP	04:30 AM	PLANT SHUT-DOW	IN 04:30 PM	
WORK HOURS	START SOIL PROCESSING	04:46 AM	END SOIL PROCE	SSING 04:02 PM	
AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY B8.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 20-SEC PROCESS RECORDS TOTAL SORT NO SORT TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0-AD<1kbq & MD>0 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME TIME TIME	LUNCH START	11:30 AH	LUNCH PERIOD	0.0 hr	
ACTUAL PROCESS HOURS (total 20-sec records) DOUN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY B88.8X PRODUCTIVITY B88.8X TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,511 NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,917 TOTAL SORT NO MD>0 & MND=0 NO SORT SOME SORT UNEXPLAINED RECORDS 0 UNEXPLAIN PAUSE AD=0 & MD>0 TIME TIME TIME	WORK HOURS		12.0) hr	
DOMN-TIME	AVAILABLE HOURS		12.0) hr	
TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 88.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,511 NONPROCESS RECORDS 1,917 TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 < AD < 1 kBq & MD > 0 UNEXPLAIN PAUSE AD = 0 & MD > 0 TIME TIME TIME TIME	ACTUAL PROCESS HO	OURS (total 20-sec	records) 10.65	hr	
NONAVAILABLE HOURS 0.0 hr START-UP	DOWN-TIME		1.35	hr	
START-UP	TOTAL SYSTEM PAUS	E	0.62	: hr	
SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 88.8X PRODUCTIVITY 88.8X TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,917 TOTAL SORT 0 MD>0 & MND=0 NO SORT 1,530 AD=0 & MD=0 & MND>0 SOME SORT UNEXPLAINED RECORDS 0 VAD<1kBq & MD>0 0 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME	NONAVAILABLE HOUR	es .	0.0) hr	
PLANT PERFORMANCE PRODUCTIVITY 88.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,917 TOTAL SORT 0 MD>0 & MND=0 NO SORT 1,530 AD=0 & MD=0 & MND>0 SOME SORT UNEXPLAINED RECORDS 0 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME	START-UP		0.28	hr	
PRODUCTIVITY 88.8% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,917 TOTAL SORT 0 MD>0 & MND=0 NO SORT 1,530 AD=0 & MD=0 & MND>0 SOME SORT UNEXPLAINED RECORDS 0 <	SHUT-DOWN		0.46	hr	
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,917 TOTAL SORT 0 MD>0 & MND=0 1,530 AD=0 & MD=0 & MND>0 SOME SORT 1,530 AD=0 & MD=0 & MND>0 387 AD>0&0<-MD<-MNDmax&MND<-MNDmax UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 0 UNEXPLAIN TIME TIME</ad<1kbq>	PLANT PERFORMANCE		88.8	X	
NONPROCESS RECORDS 1,917	PRODUCTIVITY		88.88	x	
NONPROCESS RECORDS 1,917	TOTAL SOLI PROCESSING RECORDS (2-	SEC and 20-SEC	2 511		
20-SEC PROCESS RECORDS TOTAL SORT NO SORT 1,917 0 MD>0 & MND=0 1,530 AD=0 & MD=0 & MND>0 SOME SORT 387 AD>0&0-4MD MNDmax&MND MNDmax&MND MNDmax TIME TIME					
TOTAL SORT 0 MD>0 & MND=0 NO SORT 1,530 AD=0 & MD=0 & MND>0 SOME SORT 387 AD>0&0 <md<mndmax&mnd<mndmax< td=""> UNEXPLAINED RECORDS 0 0 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME</md<mndmax&mnd<mndmax<>		,,	1,917		
NO SORT 1,530 AD=0 & MD=0 & MND>0 SOME SORT 387 AD>0&0 <md<mndmax&mnd<mndmax< td=""> UNEXPLAINED RECORDS 0 0 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME</md<mndmax&mnd<mndmax<>			•	MND=0	
SOME SORT 387 AD>08.0 <md<mndmax&mnd<mndmax< td=""> UNEXPLAINED RECORDS 0 0<ad<1kbq &="" md="">0 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME</ad<1kbq></md<mndmax&mnd<mndmax<>					
UNEXPLAINED RECORDS 0 0 < AD < 1 kBq & MD > 0 UNEXPLAIN PAUSE AD = 0 & MD 0 TIME TIME			•		ax
0 <ad<1kbq &="" md="">0 UNEXPLAIN PAUSE AD=0 & MD 0 TIME TIME</ad<1kbq>		DS			
AD=0 & HD 0 TIME TIME				UNEXPLAIN	PAUSE
AD<0 & MD 0 None 04:46	·	· HD 0		TIME	TIME
	AD<0 &	MD 0		None	04:46

File S1JA0730.WR1

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ACT_P <5 kBq 106 17.8%

2-SEC COUNT PERIODS	19,	170
2-SEC RECORDS WITH SORTS	5	594 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECT	ror
2 DETECTORS	136	80.0%
3 DETECTORS	29	17.1%
4 DETECTORS	4	2.4%
5 DETECTORS	1	0.6%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL.	•	170
NET 2-SEC RECORDS WITH SORTS	4	424
2-SEC PERIODS WITH NO SORTS	18,7	746
AVG TIME BETWEEN 2-SEC SORTS	90	0.4 sec

1-GATE S	ORTS	299	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	6	2.0%	-14000	0	-241	4000	29	4.9%	4
2	20	6.7%	-12000		-206	8000	255	42.9%	8
3	38	12.7%	-10000	0	-172	12000	99	16.7%	12
4	45	15.1%	-8000	1	-137	16000	59	9.9%	16
5	61	20.4%	-6000	4	-103	20000	23	3.9%	20
6	51	17.1%	-4000	11	-69	24000	17		24
7	62	20.7%	-2000	66	-34	28000	19		28
8	16	5.4%	0	233	0	32000	17	2.9%	32
TOTAL	299		2000	386	34	36000	11	1.9%	36
			4000	542	69	40000	7	1.2%	40
2-GATE S	ORTS	295	6000	396	103	44000	6	1.0%	44
DETECTR	SORTS	FREQ%	8000	186	137	48000	1	0.2%	48
8			10000	74	172	52000	2	0.3%	52
9	14	4.7%	12000	16	206	56000	5	0.8%	56
10	27	9.2%	14000	3	241	60000	5	0.8%	60
11	41	13.9%	16000	2	275	64000	4	0.7%	64
12	69	23.4%	18000	0	309	00083	6	1.0%	68
13	58	19.7%	20000	0	344	72000	7	1.2%	72
14	46	15.6%	22000	0	378	76000	2	0.3%	76
15	40	13.6%	24000	0	412	80000	1	0.2%	80
TOTAL	295		26000	0	447	84000	1	0.2%	84
			>28000	0	0	>84000	18	3.0%	>84
			TOTAL	1921		TOTAL	594		
SUMMARY	TOTALS								
		LE EVENTS	578		SORTS BY	ONE GATE ONLY	299		
	- ' '	ICLE EVENTS	223		SORTS BY	TWO GATES	295		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

0

2.00 Empty belt

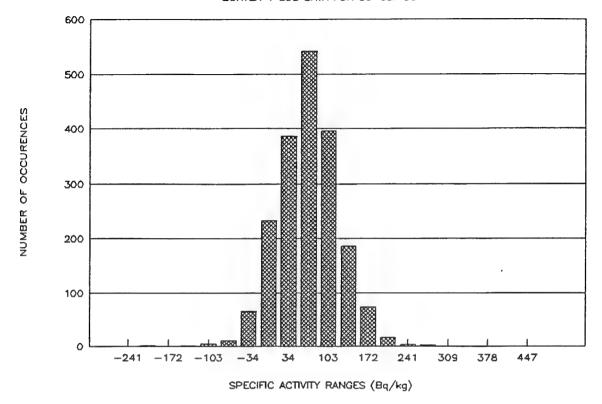
DISTRIBUTED EVENTS

3.00 Test (No process soil)

File S1JA0730.WR1

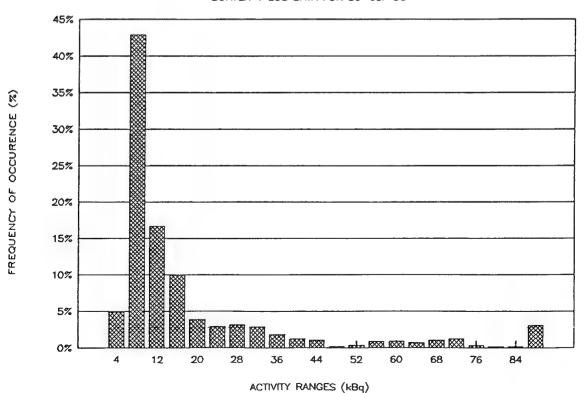
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SORTER 1 LOG DATA FOR 30-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 30-Jul-93



SORTER 2 30-Ju	ıl -93				
AVERAGE BACKGROUND COL	INT RATE	0.79 ± 0).03 c/sec		
SORTER SOIL DENSITY		1.3 tons/m ³			
GROUND SOIL DENSITY		1.65 tons/m ³			
andono dore delicer			CONTAMINATED	CLEAN	
MASS TOTAL			0.58 tons	111.5 tons	
MAXIMUM/SORT			5.1 kg	58.3 kg	
MINIMUM/SORT			0.7 kg	53.2 kg	
					_
WEIGHT RECOVERY OR VO	LUME RECOVERY				99.5%
EQUIVALENT SOIL-IN-GRO			0.46 yd ³	88.4 yd³	88.9 yd3/day
	•				
PARTICLE ACTIVITY (MA	(INUM ESTIMATE)				
TOTAL			13,114 kBq		
MAXIMUM/SORT			1,072 kBq		
MINIMUM/SORT			3.0 kBq		
				e 4/0 Le-	
DISPERSED + PARTICLE	(REALISTIC ESTIMATE) ACTI	IVITY	4,602 kBq	8,160 kBq	
MAXIMUM/SORT			679 kBq	15 kBq	
MINIMUM/SORT			0 Bq	-6 kBq	
SPECIFIC ACTIV	ITY		7,875 Bq/kg	73 Bq/kg	
WORK HISTORY			HORK DAY END	04:30 PM	
WORK DAY START			WORK DAY END PLANT SHUT-DOWN	04:30 PM	
PLANT START-UP			END SOIL PROCESSING		
START SOIL PRO			LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM		LONCH PERIOD	•••	
WORK	HOURS		12.0 hr		
	ABLE HOURS		12.0 hr		
	L PROCESS HOURS (total 2	O-sec records)	10.68 hr		
DOWN-			1.32 hr		
	SYSTEM PAUSE		0.62 hr		
	AILABLE HOURS		0.0 hr		
START			0.91 hr		
SKUT-	DOWN		0.41 hr		
	PERFORMANCE		89.0%		
	CTIVITY		89.0%		
		CO.	2,499		
	RECORDS (2-SEC and 20-S	EC)	2,477 B		
	est, calibration, etc)		1,923		
20-SEC PROCESS			0 MD>0 & MND=0		
	SORT		1,527 AD=0 & MD=0		
NO SO			396 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
SOME			0		
	PLAINED RECORDS		-	UNEXPLAIN	PAUSE
U <ad•< td=""><td>11.04 = 1</td><td></td><td></td><td>TIME</td><td>TIME</td></ad•<>	11.04 = 1			TIME	TIME
	700 0 1 10			14:22:48	04:46
4		13.9%			
ACT_I	o <5 kBq 80	13.77			

File S2JA0730.WR1

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19,230

	-2FF C001	HI PEKTODS				19,230	,				
	2	2-SEC RECORD	S WITH S	ORTS		576	(ACT_P	>0 kBq)			
	7	2-SEC RECORD	S WITH P	OSITIVES	IN >1 DI	ETECTOR	:				
		2	DETECTO	RS	134		82.2%				
		3	DETECTO	RS	21		12.9%				
		4	DETECTO	RS	7		4.3%				
		5	DETECTO	RS	1		0.6%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			163					
	N	IET 2-SEC RE	CORDS WI	TH SORTS		413					
	2	-SEC PERIOD	S WITH N	O SORTS		18,817					
	7	VG TIME BET	WEEN 2-S	EC SORTS		93.1					
1-GATE S	ORTS	301	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(k8q)
			4.								
1	17	5.6%	-14000	0	-240			4000	24	4.2%	4
2	41	13.6%	-12000	1				8000	209		8
3	48	15.9%	-10000	0	-172			12000	114	19.8%	12
4	53	17.6%	-8000	1	-137			16000	48	8.3%	16
5	61	20.3%	-6000	2	-103			20000	35	6.1%	20
6	51	16.9%	-4000	2	-69			24000	26	4.5%	24
7	26	8.6%	-2000	23	-34			28000	17		28
8	4	1.3%	0	99	0			32000	10	1.7%	32
TOTAL	301		2000	306	34			36000	10	1.7%	36
			4000	512	69			40000	13	2.3%	40
2-GATE S	ORTS	275	6000	465	103			44000	7		44
DETECTR	SORTS	FREQ%	8000	327	137			48000	10		48
8			10000	139	172			52000	5	0.9%	52
9	28	10.2%	12000	33	206		!	56000	5	0.9%	56
10	37	13.5%	14000	16	240			60000	3	0.5%	60
11	54	19.6%	16000	3	274			64000	5	0.9%	64
12	52	18.9%	18000	0	309			58000	6	1.0%	68
13	59	21.5%	20000	0	343		1	72000	3	0.5%	72
14	31	11.3%	22000	0	377		7	76000	2	0.3%	76
15	14	5.1%	24000	0	412			30000	2	0.3%	80
TOTAL	275		26000	0	446			34000	2	0.3%	84
			>28000	0	0		>8	34000	20	3.5%	>84
			TOTAL	1929			1	TOTAL	576		
SUMMARY	TOTALS										
н	T PARTIC	LE EVENTS	558		SORTS BY	ONE GA	ATE ONLY	r	301		
MU	JLTIPARTI	CLE EVENTS	243		SORTS BY	TWO GA	ATES		275		
D	STRIBUTE	D EVENTS	0								

REC CODE EXPLANATION

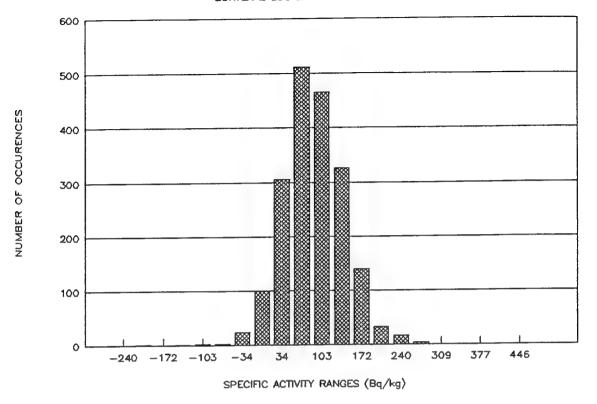
1.00 Source check (Soil on belt)

2.00 Empty belt

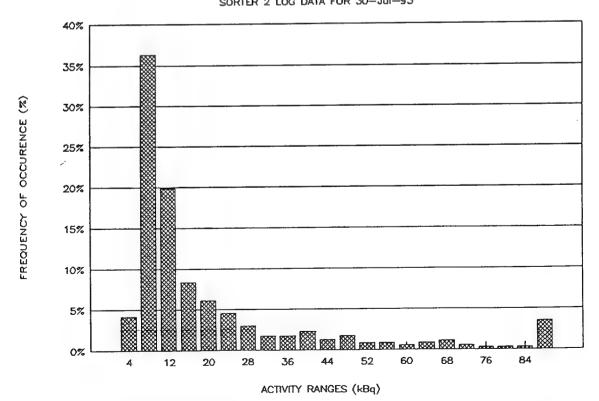
2-SEC COUNT PERIODS

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 30-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 30-Jul-93



SORTER 1 31-Jul-93 AVERAGE BACKGROUND COUNT RATE 0.70 ± 0.01 c/sec SORTER SOIL DENSITY 1.3 tons/m3 GROUND SOIL DENSITY 1.65 tons/m3 CLEAN CONTAMINATED MASS TOTAL 0.18 tons 40.4 tons MAXIMUM/SORT 5.1 kg 58.2 kg MINIMUM/SORT 0.7 kg 53.1 kg WEIGHT RECOVERY OR VOLUME RECOVERY 99.6% EQUIVALENT SOIL-IN-GROUND 0.14 yd3 32.1 yd3 32.2 yd3/day PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL 3,681 kBq MAXIMUM/SORT 275 kBq MINIHUM/SORT 2.5 kBq DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 1,236 kBq 2,121 kBq MAXIMUM/SORT 135 kBq 12 kBq MINIMUM/SORT 0 Bq -6 kBq SPECIFIC ACTIVITY 6,907 Bq/kg 52 Bq/kg WORK HISTORY WORK DAY START 05:00 AM WORK DAY END 04:30 PM PLANT START-UP 05:00 AM PLANT SHUT-DOWN 10:15 AM START SOIL PROCESSING 05:52 AM END SOIL PROCESSING 09:44 AM LUNCH START 11:30 AM LUNCH PERIOD 0.5 hr WORK HOURS 11.0 hr AVAILABLE HOURS 5.2 hr ACTUAL PROCESS HOURS (total 20-sec records) 3.88 hr DOWN-TIME 1.37 hr TOTAL SYSTEM PAUSE 0.00 hr NONAVAILABLE HOURS 5.8 hr START-UP 0.87 hr SHUT-DOWN 0.51 hr PLANT PERFORMANCE 73.9% PRODUCTIVITY 35.3% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 850 NONPROCESS RECORDS (Test, calibration, etc) 18 20-SEC PROCESS RECORDS 698 TOTAL SORT 0=0MM & 0<0M 0 NO SORT 567 AD=0 & MD=0 & MND>0 SOME SORT 131 AD>0&0<MD<MNDmax&MND<MNDmax UNEXPLAINED RECORDS 0 0<AD<1kBq & MD>0 1 **PAUSE** UNEXPLAIN AD=0 & MD 0 TIME TIME AD<0 & MD 0 07:46:41 None

File S1JA0731.WR1

ACT_P <5 kBq

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34

22.4%

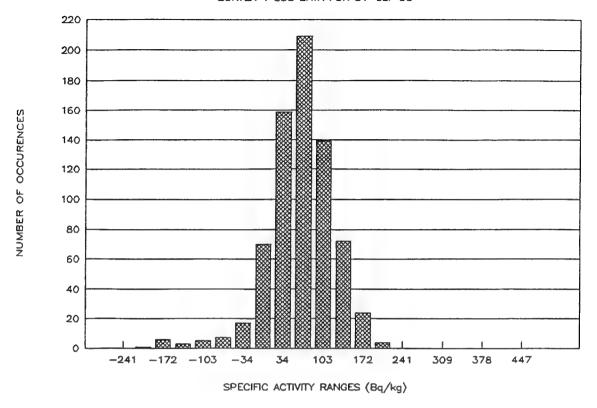
2-SEC COUNT PERIODS	6,9	80
2-SEC RECORDS WITH SORTS	1	52 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECT	OR
2 DETECTORS	38	70.4%
3 DETECTORS	11	20.4%
4 DETECTORS	4	7.4%
5 DETECTORS	1	1.9%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL		54
NET 2-SEC RECORDS WITH SORTS		98
2-SEC PERIODS WITH NO SORTS	6,8	82
AVG TIME BETWEEN 2-SEC SORTS	142	.4 sec

1-GATE SO	ORTS	68	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
_			44000		2/4	4000	11	7.2%	4
1	1	1.5%	-14000	0	-241	8000	61	40.1%	8
2	10	14.7%	-12000	1	-206				12
3	10	14.7%	-10000	6	-172	12000	22		16
4	14	20.6%	-8000	3	-137	16000	14		
5	15	22.1%	-6000	5	-103	20000	4	2.6%	20
6	8	11.8%	-4000	7	-69	24000	4	2.6%	24
7	R	11.8%	-2000	17	-34	28000	5		28
8	2	2.9%	0	70	0	32000	3		32
TOTAL	68		2000	159	34	36000	3		36
			4000	209	69	40000	2	1.3%	40
2-GATE SO	ORTS	84	6000	139	103	44000	2	1.3%	44
DETECTR	SORTS	FREQ%	8000	72	137	48000	1	0.7%	48
8			10000	24	172	52000	1	0.7%	52
9	8	9.5%	12000	4	206	56000	0	0.0%	56
10	13	15.5%	14000	0	241	60000	2	1.3%	60
11	15	17.9%	16000	O	275	64000	2	1.3%	64
12	20	23.8%	18000	0	309	68000	2	1.3%	68
13	14	16.7%	20000	0	344	72000	1	0.7%	72
14	10	11.9%	22000	0	378	76000	0	0.0%	76
15	4	4.8%	24000	0		80000	0	0.0%	80
	84	4.0%	26000	0	447	84000	3		84
TOTAL	04		>28000	0	0	>84000	9		>84
			TOTAL	716	_	TOTAL	152		
SUMMARY	PATOT								
	OT PARTICE	E EVENTS	165		SORTS BY	ONE GATE ONLY	68		
•••	• • • • • • • • • • • • • • • • • • • •	CLE EVENTS	81			TWO GATES	84		
			0		-511.15				
U	ISTRIBUTED	CAEM12	U						

REC CODE EXPLANATION

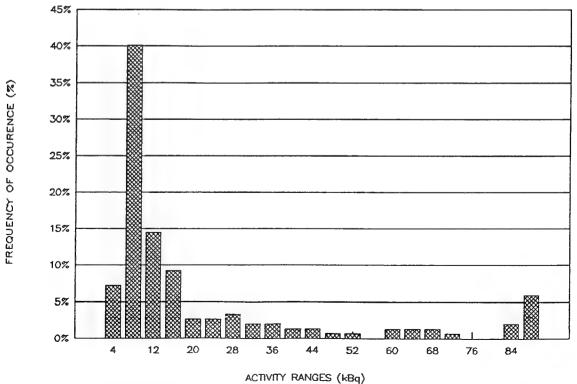
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 31-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 31-Jul-93



SORTER 2 31-Jul-93				
AVERAGE BACKGROUND COUNT RATE	0.75 ± 0	.05 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³			
GROUND SOIL DENSITY	1.65 tons/m ³			
andons core sensor.		CONTAMINATED	CLEAN	
MASS TOTAL		0.17 tons	40.9 tons	ı
MAXIMUM/SORT		5.1 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	53.2 kg	
				99.6%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.13 yd³	32.4 yd³	32.5 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.13 /4	32.4 /4	02.5 / 4 / 44/
PARTICLE ACTIVITY (MAXIMUM ESTIMATI	E)			
TOTAL		2,886 kBq		
MAXIMUM/SORT		84 kBq		
MINIMUM/SORT		3.6 kBq		
HIMIHON SOK!		•		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	1,045 kBq	2,873 kBq	
MAXIMUM/SORT		54 kBq	14 kBq	
MINIMUM/SORT		0 Bq	-5 k8q	
SPECIFIC ACTIVITY		6,326 Bq/kg	70 Bq/l	g
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	10:15 AH	
START SOIL PROCESSING	05:52 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		11.0 hr		
AVAILABLE HOURS		5.2 hr		
	RS (total 20-sec records)	3.91 hr		
DOWN-TIME	•	1.34 hr		
TOTAL SYSTEM PAUSE		0.00 hr		
NONAVAILABLE HOURS		5.8 hr		
START-UP		0.87 hr		
SHUT-DOWN		0.48 hr		
PLANT PERFORMANCE		74.5%		
PRODUCTIVITY		35.6%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	867		
NONPROCESS RECORDS (Test, calibrat		12		
20-SEC PROCESS RECORDS		704		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		585 AD=0 & MD=0		
SOME SORT		119 AD>0&0 <md<mn< td=""><td>Camax&MND <mndmax< td=""><td>t</td></mndmax<></td></md<mn<>	Camax&MND <mndmax< td=""><td>t</td></mndmax<>	t
UNEXPLAINED RECORDS	s	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &	MD 0		TIME	TIME
AD<0 &	MD 0		None	None
ACT_P <5 kBq	22 13.5%			

File S2JA0731.WR1

1

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7,040

	- 2EC COC	HI PEKTODS				7,040					
		2-SEC RECORD	S WITH S	ORTS		163	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	43		93.5%				
		3	DETECTO	RS	3		6.5%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			46					
		NET 2-SEC RE	CORDS WI	TH SORTS		117					
		2-SEC PERIOD	S WITH N	O SORTS		6,923					
		AVG TIME BET	WEEN 2-SI	EC SORTS		120.3	sec				
1-GATE S		86	ACT_ND	NUMBER	_			CT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	7	8.1%	-14000	0	-240			4000	8	4.9%	4
2	18	20.9%	-12000	0	-206			8000	57	35.0%	8
3	10	11.6%	-10000	1	-172		1	2000	25	15.3%	12
4	14	16.3%	-8000	5	-137		1	6000	21	12.9%	16
5	19	22.1%	-6000	2	-103		2	20000	10	6.1%	20
6	10	11.6%	-4000	5	-69		2	4000	7	4.3%	24
7	7	8.1%	-2000	12	-34		2	28000	4	2.5%	28
8	1	1.2%	0	46	0		3	2000	6	3.7%	32
TOTAL	88		2000	127	34		3	6000	3	1.8%	36
			4000	176	69		4	0000	3	0.6%	40
2-GATE SO	ORTS	77	6000	156	103		4	4000	3	1.8%	44
DETECTR	SORTS	FREQ%	8000	103	137		4	8000	4	2.5%	48
8			10000	64	172		5	2000	2	1.2%	52
9	9	11.7%	12000	13	206		5	6000	2	1.2%	56
10	13	16.9%	14000	5	240		6	0000	1	0.6%	60
11	10	13.0%	16000	1	274		6	4000	1	0.6%	64
12	17	22.1%	18000	0	309		6	8000	3	1.8%	68
13	14	18.2%	20000	0	343		7	2000	2	1.2%	72
14	12	15.6%	22000	0	377		7	6000	- 1	0.6%	76
15	2	2.6%	24000	0	412		8	0000	1	0.6%	80
TOTAL	77		26000	0	446		8	4000	0	0.0%	84
			>28000	0	0		>8	4000	1	0.6%	>84
			TOTAL	716			T	OTAL	163		

REC CODE EXPLANATION

SUMMARY TOTALS

1.00 Source check (Soil on belt)

0

2.00 Empty belt

DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

3.00 Test (No process soil)

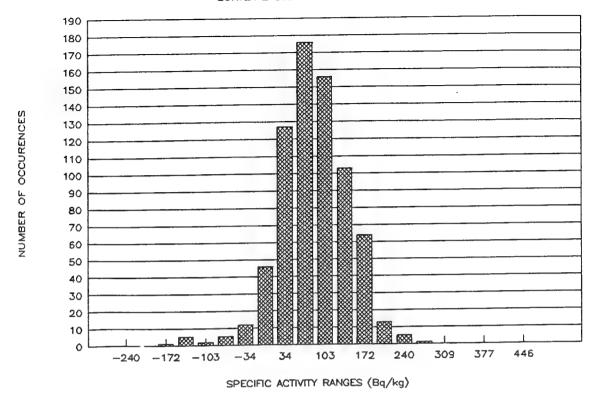
HOT PARTICLE EVENTS 158

MULTIPARTICLE EVENTS 68

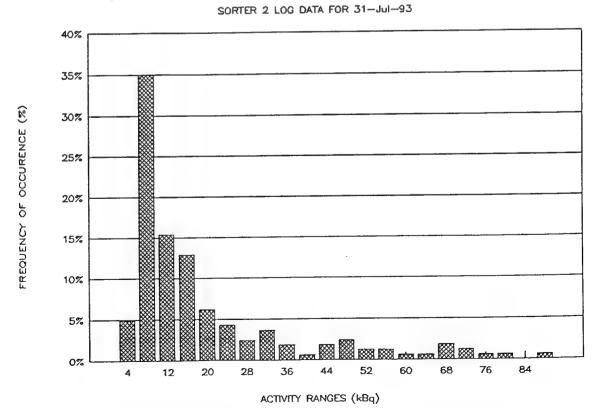
SORTS BY DNE GATE ONLY

SORTS BY TWO GATES

SORTER 2 LOG DATA FOR 31-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 1 02-Aug-93				
AVERAGE BACKGROUND COUNT RATE	0.72 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.14 tons	108.2 ton:	s
MAXIMUM/SORT		3.6 kg	58.2 kg	•
MINIMUM/SORT		0.7 kg	54.6 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Υ			99.9%
EQUIVALENT SOIL-IN-GROUND	••	0.11 yd³	85.8 yd³	85.9 yd3/day
EGGIAMENI 2015 IN GROOM		7.0	,	• • •
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		2,150 kBq		
MAXIMUM/SORT		87 k 8q		
MINIHUM/SORT		3.0 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	792 kBq	1,085 kBq	
MAXIMUM/SORT		50 kBq	13 kBq	
MINIMUM/SORT		0 Bq	-8 kBq	
SPECIFIC ACTIVITY		5,853 8q/kg	10 Bq/i	(g
			·	
WORK HISTORY				
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM	
START SOIL PROCESSING	05:34 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		. 11.5 hr		
ACTUAL PROCESS HO	URS (total 20-sec records)	10.34 hr		
DOWN-TIME		1.16 hr		
TOTAL SYSTEM PAUS	Ε	0.00 hr		
NONAVAILABLE HOUR	s	0.0 hr		
START-UP		0.57 hr		
SHUT-DOWN		0.59 hr		
PLANT PERFORMANCE		90.0%		
PRODUCTIVITY		90.0%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	1,983		
NONPROCESS RECORDS (Test, calibra		8		
20-SEC PROCESS RECORDS	•	1,862		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,754 AD=0 & MD=0 &	O <dm< td=""><td></td></dm<>	
SOME SORT		108 AD>0&0 <hd<hnd< td=""><td>max&MND<mndmax< td=""><td></td></mndmax<></td></hd<hnd<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECOR	DS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
& 0=0A	MD 0		TIME	TIME
& O>DA	MO 0		12:07:44	None
	00 01 01			

File S1JA0802.WR1

ACT_P <5 kBq

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182

29 24.0%

18,620

	2-SEC COX	INT PERIODS				10,020					
		2-SEC RECORD					(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH PO	OSITIVES		TECTOR					
		2	DETECTOR	≀S	25		83.3%				
		3	DETECTOR	RS	4		13.3%				
		4	DETECTOR	RS	1		3.3%				
		5	DETECTOR	RS .	0		0.0%				
		6	DETECTOR	RS	0		0.0%				
		7	DETECTOR	RS	0		0.0%				
		8	DETECTOR	≀S	0		0.0%				
		T	OTAL			30					
		NET 2-SEC RE	CORDS WIT	TH SORTS		91					
		2-SEC PERIOD	S WITH NO	SORTS		18,529					
		AVG TIME BET	WEEN 2-SE	C SORTS		409.2	sec				
4 0175	27000	59	ACT ND	UIMOED	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE			ACT_ND		(Bq/kg)			(Bq)	(#)		(kBq)
DETECT	R SORTS	FREQ%	(Bq)	(#)	(64) (9)			(04)	4		440
1	4	6.8%	-14000	0	-241			4000	7	5.8%	4
2	5	8.5%	-12000	0	-206			8000	53	43.8%	8
3	7	11.9%	-10000	0	-172			12000	17	14.0%	12
4	12	20.3%	-8000	4	-137			16000	9	7.4%	16
5	19	32.2%	-6000	10	-103			20000	7	5.8%	20
6	7	11.9%	-4000	74	-69			24000	1	0.8%	24
7	3	5.1%	-2000	257	-34			28000	3	2.5%	28
8	2	3.4%	0	447	0			32000	4	3.3%	32
TOTAL	59		2000	525	34			36000	1	0.8%	36
			4000	377	69			40000	3	2.5%	40
2-GATE	SORTS	62	6000	124	103			44000	1	0.8%	44
DETECT		FREQ%	8000	44	137			48000	2	1.7%	48
8			10000	5	172			52000	2	1.7%	52
9	4	6.5%	12000	2	206			56000	3	0.8%	56
10	7	11.3%	14000	1	241			60000	0	0.0%	60
11	10	16.1%	16000	0	275			64000	1	0.8%	64
12	18	29.0%	18000	0	309			68000	1	0.8%	68
13	17	27.4%	20000	0	344			72000	1	0.8%	72
14	4	6.5%	22000	0	378			76000	2	1.7%	76
15	2	3.2%	24000	0	412			80000	3	2.5%	80
TOTAL	62		26000	0	447			84000	0	0.0%	84
			>28000	0	0		>	84000	2	1.7%	>84
			TOTAL	1870				TOTAL	121		
SUMMAR'	Y TOTALS										
	HOT PART	ICLE EVENTS	120		SORTS BY	ONE G	ATE ONL	Y	59		
	MULTIPART	TICLE EVENTS	66		SORTS BY	TWO G	ATES		62		
	DISTRIBUT	TED EVENTS	0								

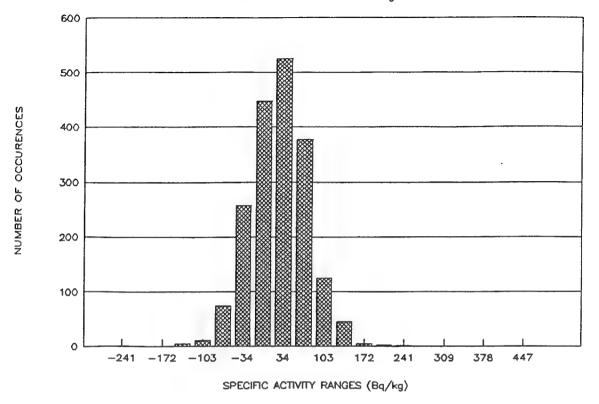
REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

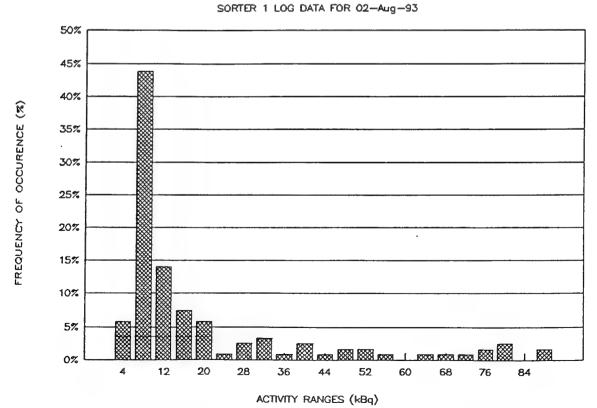
2-SEC COUNT PERIODS

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 02-Aug-93



JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 02-Aug-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.	02 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.19 tons	107.1 tons	
MAXIMUM/SORT		61.3 kg	58.3 kg	
MINIMUM/SORT		0.7 kg	52.4 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.8%
EQUIVALENT SOIL-IN-GROUND		0.15 yd³	84.9 yd3	85.0 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	E)			
TOTAL		4,517 kBq		
MAXIMUM/SORT		398 kBq		
MINIMUM/SORT		3.4 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	1,496 kBq	3,392 kBq	
MAXIMUM/SORT		265 kBq	17 kBq	
MINIMUM/SORT ·		0 Bq	-8 kBq	
SPECIFIC ACTIVITY		7,973 Bq/kg	32 Bq/I	.9
WORK HISTORY		IMPL DAY END	04:30 PM	
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM	
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN		
START SOIL PROCESSING	05:34 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	RS (total 20-sec records)	10.22 hr		
DOWN-TIME	(1010)	1.28 hr		
TOTAL SYSTEM PAUSE		0.11 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.57 hr		
SHUT-DOWN		0.59 hr		
PLANT PERFORMANCE		88.9%		
PRODUCTIVITY		88.9%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	1,960		
NONPROCESS RECORDS (Test, calibrat		11		
20-SEC PROCESS RECORDS		1,840		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		1,747 AD=0 & MD=0 &		
SOME SORT		92 AD>0&0 <md<mn< td=""><td>Omax&MND<mndmax< td=""><td>t .</td></mndmax<></td></md<mn<>	Omax&MND <mndmax< td=""><td>t .</td></mndmax<>	t .
UNEXPLAINED RECORD	s	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &	MD 1		TIME	TIME
AD<0 &			13:01:33	12:54
ACT_P <5 kBq	13 10.8%			

File S2JA0802.WR1

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120 (ACT_P >0 kBq)

18,400

		E DEC RECORD		, o			(,,,,,,	· o kbd)			
		2-SEC RECORD	S WITH P	POSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	32		80.0%				
		3	DETECTO	RS	4		10.0%				
		4	DETECTO	RS	2		5.0%				
		5	DETECTO	RS	2		5.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			40					
		NET 2-SEC RE	CORDS WI	TH SORTS		80					
		2-SEC PERIOD	S WITH N	O SORTS		18,320					
		AVG TIME BET	WEEN 2-S	EC SORTS		460.0	sec				
1-GATE S	ORTS	60	ACT_ND		SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	1	1.7%	-14000	0	-240			4000	5	4.2%	4
2	5	8.3%	-12000	1	-206			8000	31	25.8%	8
3	13	21.7%	-10000	2	-172			12000	14	11.7%	12
4	13	21.7%	-8000	0	-137			16000	11	9.2%	16
5	14	23.3%	-6000	9	-103			20000	8	6.7%	20
6	7	11.7%	-4000	40	-69			24000	2	1.7%	24
7	6	10.0%	-2000	128	-34			28000	6	5.0%	28
8	1	1.7%	0	315	0			32000	4	3.3%	32
TOTAL	60		2000	484	34			36000	2	1.7%	36
			4000	459	69			40000	3	2.5%	40
2-GATE SO		60	6000	261	103			44000	2	1.7%	44
DETECTR	SORTS	FREQ%	8000	116	137			48000	6	5.0%	48
8	_		10000	29	172			52000	0	0.0%	52
9	3	5.0%	12000	4	206			56000	4	3.3%	56
10	7	11.7%	14000	1	240			60000	3	2.5%	60
11	15	25.0%	16000	1	274			64000	3	2.5%	64
12	14	23.3%	18000	1	309			68000	1	0.8%	68
13	9	15.0%	20000	0	343			72000	2	1.7%	72
14	7	11.7%	22000	0	377			76000	3	2.5%	76
15	5	8.3%	24000	0	412			80000	2	1.7%	80
TOTAL	60		26000	0	446			84000	0	0.0%	84
			>28000	0	0			84000	8	6.7%	>84
			TOTAL	1851				TOTAL	120		
SUMMARY T		01 F FUEUTS	400			AUE					
нс	JI PARTI	CLE EVENTS	109		SORTS BY	ONE GA	TE ONL	Y	60		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)

65

84

2.00 Empty belt

MULTIPARTICLE EVENTS

DISTRIBUTED EVENTS

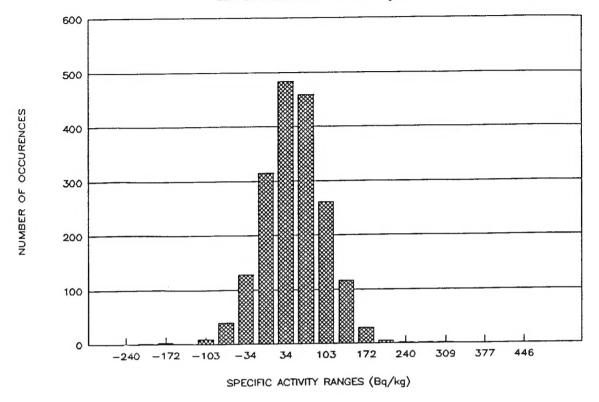
2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

3.00 Test (No process soil)

SORTS BY TWO GATES

SORTER 2 LOG DATA FOR 02-Aug-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 02-Aug-93

28% 26% 24% 22% FREQUENCY OF OCCURENCE (%) 20% 18% 16% 14% 12% 10% 8% 6% 4% 2% 0% 76 84 52 60 68 12 20 28 36 44

ACTIVITY RANGES (kBq)

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